Best Practice Accelerator Sales

Technical documentation

18.05.2022 | Jedox

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1. Introduction

This document describes the solution "Accelerator Sales". The Accelerator is a solution with predefined content as a model to plan Sales data easily. It can be used as a starting point in projects to have a framework of already existing content like start page, upload functionality for dimension and cube data, planning and analysis reports, user rights, etc. This provides users the possibility of unified planning, seamless data integration, and simplified planning, reporting, and data analysis.

The document gives an overview of the Jedox application, describing the installation and configuration of the Accelerator, reports, database, and Integrator projects. In addition, it gives implementation hints on Jedox functioning, helping to understand, for example, how a report was built (pointing to which cube or dimension and attribute).

1.1 Document key – Read me

This document includes some tricks to provide a faster understanding of the solution:

1. This document is like a library. You do not need to start at the beginning and work your way through to the end. Feel free to do so or scan the table of contents and read what interests you most.

2. For each chapter (and report) a target group is defined. Depending on your knowledge, follow the chapters to read what is relevant to you and feel free to skip those which are irrelevant.
   There are 3 different types specified:
   - **End-user** – A professional expert on customer side who uses the Jedox software. This person plans data. Might not have been part of the implementation process of Jedox.
   - **Power user** – A user of the Jedox software on customer side whose skills and expertise are (will be) more advanced than most other users, especially a person who is assigned additional administrative rights and responsibilities for Jedox, e.g.
     definition of dimension structures, defining source systems, load of data, etc. Usually, attendee in Kick Off workshop.
   - **Implementation expert** – A Jedox expert with knowledge about Data Modelling, Integrator, Reporting, Business Logics, etc.

3. Some implementation hints are giving on how a report or logic is built in the backend/background (Database, Integrator). Those tips are marked with "Implementation hint:" and are only relevant for implementation experts and power users which are interested in or would like to adjust the application.

1.2 Basic information about Jedox Suite

In this chapter, the current Jedox version, access to information regarding Jedox functionality and the system requirements of the Jedox Suite are briefly described. The Accelerator can be used with versions beginning from Jedox Suite 2022.1.
The target group of the following chapters are power users and interested end users.

Information, manuals, and tips & tricks can be found on the Jedox Knowledge Base website. The Knowledge Base is a comprehensive source of knowledge for all Jedox topics.
Link to the Ideas Portal, Support Manual, Jedox downloads (older and current Jedox versions) can be found within the Customer Portal.

Knowledgebase:

http://knowledgebase.jedox.com/

Customer Portal:

https://my.jedox.com/

Jedox and therefore the Accelerator can be used on different browsers. A full list is found here:
Technical specifications

1.3 Architecture of Jedox components

The target group of this chapter are power users and interested end users.
Jedox optimizes planning, analytics, dashboards, and reporting with one unified solution for Business Intelligence (BI) and Corporate Performance Management (CPM). The solution combines the highly scalable Jedox analytics engine with a consistent experience across all devices that is designed to empower business users.

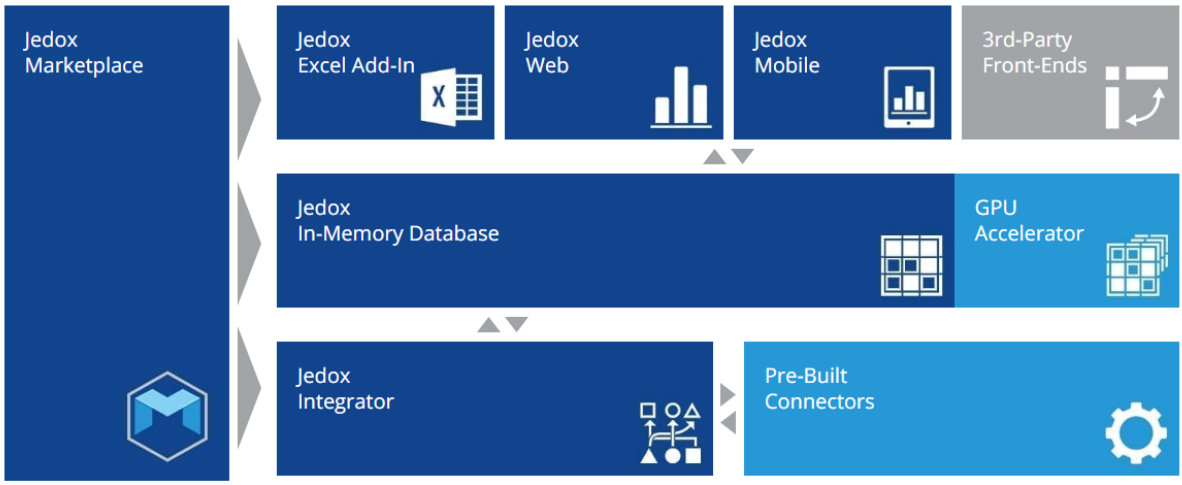


Figure 1: Jedox Architecture

The components used for the Jedox application are briefly described below.

Jedox In-Memory Server (OLAP – Online Analytical Processing)
The Jedox In-Memory server provides you with a highly scalable analytical appliance that delivers real-time performance over volatile enterprise data. The engine enables complex planning and forecasting with in-memory rules modelling, predictive analytics with powerful statistical heuristics and instant consolidations and reporting

over large multidimensional datasets. All changes are logged for audit and compliance. The data stored in the cubes are displayed using PALO.DATA formulas within the web reports.

Jedox Web
Jedox Web connects all Jedox components in a uniform web interface. Depending on the user's authorization, all functions of the Jedox Suite are available. This allows web-based reports to be generated centrally via a browser, the OLAP database to be modeled, and ETL processes to be monitored. In addition, end users can call up analyzer reports.

Jedox Integrator (ETL)
Jedox Integrator is used to create, modify, monitor, and execute all data integration projects. Various data sources can be integrated into the Jedox database, by building the connections to various data sources, to extract, transform, and import master data and transaction data.

Jedox Marketplace
Jedox Marketplace is a web-based showroom featuring integrated planning and enterprise performance management applications for finance, sales, human resources, and other departments built by different Jedox Experts from Jedox Partners to the software vendor. Jedox Marketplace gives access to all those applications which incorporate best practices from around the world. The admin tool does not use the Jedox Marketplace as it is a customized built-in application.

Jedox Excel Add-in
Jedox Excel Add-in gives a user Business Intelligence and Enterprise Performance Management capabilities from flexible data modeling to ad hoc analytics, collaborative planning right in Excel. The admin tool does not use the Jedox Excel Add-in.

Jedox Mobile
Jedox Mobile empowers users to check real-time business intelligence dashboards, view canned reports, analyze data ad hoc, or submit planning figures with ease and security by mobile devices. The admin tool does not use the Jedox Mobile.

1.4 Description of Jedox Web components

The target group of the following chapter are power users and interested experts.
The web interface of the Jedox Suite, in which the application is developed, is shown in the following image.

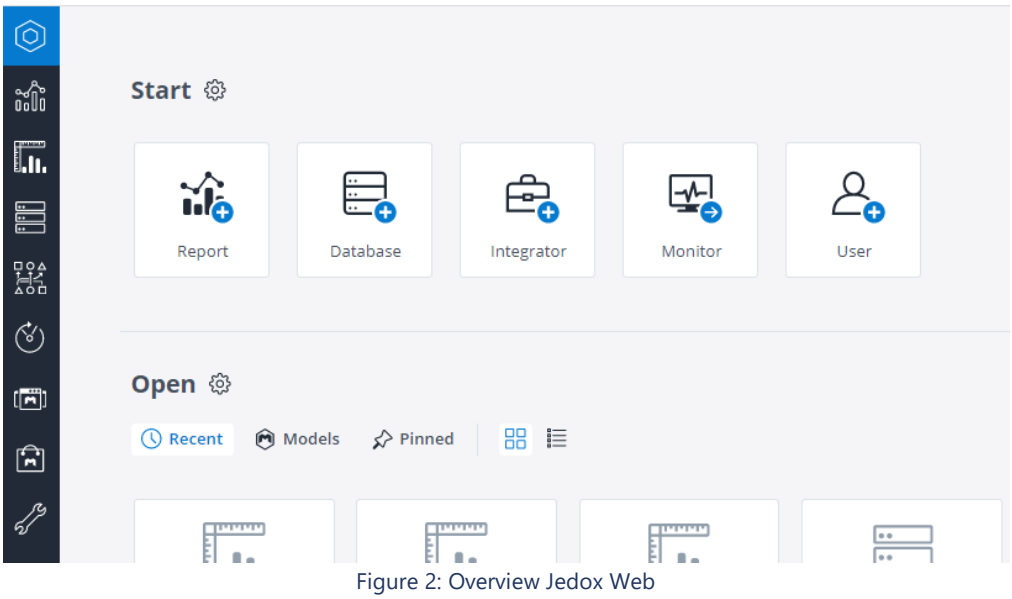


Figure 2: Overview Jedox Web

Jedox Web interface (Jedox Suite) consists of different components, which are briefly described below:

Homepage

The homepage gives users access with one click to the most used features, like creating a new report, database, Integrator project, or new user. It shows the recent opened reports, which can also be accessed by one click, and provides some useful links to the Knowledge Base, trainings, what's new, etc.

Reports

The Jedox Reports publish all reports created in Report Designer in Jedox Web and provide a navigation interface. Business users usually have access only to this component, in which they can navigate between reports for planning, reporting, and analyzing data.

Designer

The Report Designer allows business users to manage and organize spreadsheets and other related content in a secure, user-based administrative environment. Jedox Designer provides individual data storage areas for each Jedox application and user, allowing the source files and related information, such as PDF, text, or images, to be integrated quickly and easily into a Jedox application.

Modeler

The Jedox Modeler allows the creation and modification of Jedox In-Memory / OLAP databases. The modeling environment makes it possible to create dimensions, elements, and store and combine them into Jedox OLAP data cubes. Alternatively, it is also possible to create dimensions and cubes using the Integrator.

Integrator

Jedox Integrator is used to create, modify, monitor, and execute all data integration projects. Various data sources can be integrated into the Jedox database, by building the connections to various data sources, to extract, transform, and import master data and transaction data.

Scheduler

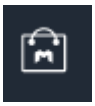
In the Jedox Scheduler, work orders can be created and administrated for the execution of ETL processes. It means Integrator jobs will be scheduled to be executed at a specific time, like nightly jobs.

My Models

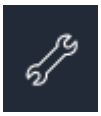
The "My Models" panel provides an overview of all models that were created or installed on the Jedox Web server. Models can be installed through the Marketplace. In a new installation, the "My Models" panel will most likely be empty. When models are installed, they are listed in a hierarchical structure on the left side, with a detailed list in the main window. The user can navigate to the reports of a specific model from "My Models" by clicking the arrow icon. Reports are also accessible by navigating directly to the Reports section of Jedox Web. The list in "My Models" shows if an update is available in the Marketplace for one or more of the installed models.

Marketplace

The "Marketplace" panel shows all published models. The content here comes from a centralized server which is accessed over the Internet. If the Jedox server has no access to the Internet, the Marketplace may be shown on the client's web browser, but the actual installation of models will not be possible.



Administration



In administration, different configurations can be set, for example global connections, user rights, and licenses. All users and groups that can access individual components and databases within the Jedox Suite are created and maintained there.

The primarily used components are implementation of a new project or designer for development of web reports, as well as for the Modeler and Integrator for creating and importing master data and transaction data.

1.5 User rights in Jedox

This chapter describes user, user group, and role rights in Jedox.
The target group of the following chapter are power users.

User

A user is a user who is assigned to one or more user groups. Multiple users can be in one user group. One user can have multiple user groups. In this case the user gets the rights of the most powerful user group.

User group

Application rights are set by the user group. Rights can be set to only have access to specific databases, elements, report and folder groups, etc. If all users have different access rights, one user group must be created per user. A user group is assigned to a role, that is, a user group can have access to only one database, or a user group sees in one dimension only the relevant regions which they should see.

Role

System relevant accesses are set by role. The role gives access to sections like Designer (for editing reports); see the Modeler and the Administration section.
The existing roles can be used in most projects. For example, the role Viewer is for business users which should view but not adjust reports; therefore, they get no access to the Designer, Modeler or Administration.

Find more information about user, user groups, and roles in the Knowledge Base.
https://knowledgebase.jedox.com/knowledgebase/administration-user-rights/

2. Installation & configuration

This chapter describes how to install and configure the Accelerator model. That means, what are the first tasks to do after the installation?
The target group of the following chapters are implementation experts and interested power users.

2.1 Installation

To install the Accelerator, go through the following steps:

1. Go to the Marketplace / In case of the .jdpx file: click on "Install from file"
2. Select "Accelerator Sales"
3. Click on "Install"
4. Enter information like Business Email, etc.
5. Namespace "Global", click on "Next"
6. Available Accelerators, click on "Next"
7. Accept the agreement, click on "Next"
8. Define database name
9. Enter same database name
10. Click on "Finish".

2.2 Configuration

The Accelerator has multiple features included, and with the configuration you can choose one of the solutions. Therefore, unnecessary features can be activate/deactivated. This chapter describes the features and how to set them.
The target group of the following chapters are implementation experts and interested power users.

2.2.1 Configuration – quick start guide

The following steps describe how to configure the environment:

- ✓ Setup dimensions
- ✓ Setup rules: Check planning rules for cube Sales.

The next chapters describe the adjustments more in detail.

2.2.2 Setup dimensions

The "1. Define dimensions" report defines which dimensions are relevant for the customer project. If dimensions are deactivated what happens is: in planning reports, combo boxes will be hidden and in "upload data" the data will be written to a dummy element. The dimension will not be removed from the cube Sales.
This functionality should be sufficient for most projects. Only if this functionality feels not sufficient, and a new dimension should be added to the cube or removed from the cube, the following must be done:

- Add/Remove dimension in dimension "_dimension control" by deleting the element
- Add/Remove dimension to cube (Default element must be set for all dimensions beforehand). Go to modeler, select cube, and click on "change layout…"
- Adjust Integrator project "SKS_10_Salesforce" the Fieldtransform "cActuals_40_FT" to add/remove the dimension
- Adjust Integrator project "SKS_20_Upload_data" the FieldTransform "cSales_20_FT"
- Adjust PALO.DATA formula in all planning and reporting reports (Budget planning, Analysis)
- All other functionality, like copy version, should be working without any changes.

2.2.3 Setup rules

Check the rules editor for cube Sales and activate existing rule and/or adjust rule to customer requirements. Define which currency conversion should be used out of the following two:

1. Calculation of Local Currency (LC) to EUR, in this case the LC definition is e.g. based on the Legal Entity.
2. Or data entry to GBP, JPY, etc. and calculation to EUR. In this case, multiple currencies can be entered for the same legal entity.

Once decided which option to use, deactivate the unnecessary rule.

Find more information about the options in chapter 4.9, "Multi-currency support", and details about the business logics (rules) in chapter 0, "The following shows the cube design.

Type	Name
❒	**Sales**
↖	Version
↖	Month
↖	Legal Entity
↖	Product
↖	Customer
↖	Region
↖	Sales Reps
↖	Channel
↖	Type Sales
↖	Status Sales
↖	Currency
↖	Sales_measure

Type	Name	Type	Name
❒	**_VersionMonthControl**	❒	**Report_Management**
↖	Version	↖	#_GROUP_
↖	Month	↖	Report
↖	_Application		
↖	_VersionMonthControl_measure		

Legend

Type	Definition

❒	Cube
↖	Dimension

".

3. Web reports

This chapter gives an overview of reports and describes the process of setting up the environment, like uploading dimensions, uploading data, etc.
The target group of the following chapters are implementation experts, power users and interested end users.

Implementation hint 1: when adjusting reports, check parameters sheet in the report(s). More descriptions and explanations of named ranges, etc. can be found there.

Implementation hint 2: the name of the reports can be adjusted either in the "Report Management" report or directly in the "Report" dimension in the "Name" attribute. It is recommended to adjust the name as well in the Integrator project "SKS_1_Create_Database" in extract "dReport_10_CTree". With adjusting it in the Integrator, this load can be repeatedly used.
If setting rights is done using the Integrator as well the new report name should be adjusted here too: "cReport_Management_InitialLoad_10_CT".

3.1 Report overview

The Accelerator provides users with the possibility to easily plan Sales targets. It is built in 4 sections:
DATA PREPARATION: reports to prepare the planning process, like upload dimension structures, set planning version and year (which are open for data entry), upload actuals, etc.
PLANNING: planning reports.
REPORTING: reports to view data only (without data entry).
ADMINISTRATION: reports for power users, like access rights, report settings (publish/unpublish) reports, copy data from one version to another, etc.

3.2 Process – setup and plan

There are different ways to set up the environment after installation and before planning:

1. Open report "**define dimensions**" to define which dimensions should be part of the Sales cube. The dimensions will still be part of the Sales cube, but only with one dummy element "tilde". If at a later point one of the dimensions are relevant, they can still be used.
2. Open report "**Setup dimension structure**" (PC/FH) to upload elements, hierarchies, and attributes from either a file or Salesforce. If another source system should be used, an Integrator job can be created and the job name can be entered in the "_dimension control" dimension, in the ETLProjectFromSource and ETLJobFromSource attributes.
3. Open report "**Setup plan version and year**": open and close data entry for the specific month and version combination.
4. Open report "**Upload data**" to upload actuals.
5. Open report "**Budget planning**" to enter budget and forecast data. Only cells specified in report Setup plan version and year and for which the workflow is setup are open for data entry.
6. To **view planned data and actuals**, open report "Analysis".

3.3 Data preparation

In this chapter all reports regarding data preparation are described.

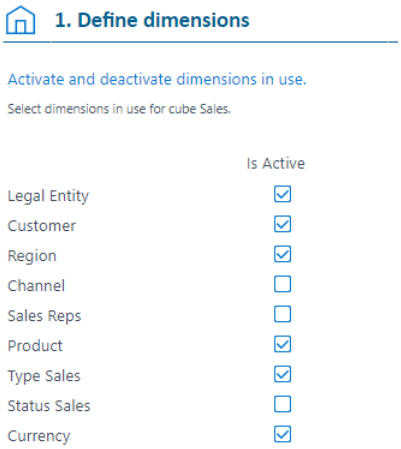
3.3.1 Define dimensions

The "1. Define dimensions" report stores the information about which dimensions are activated for storing Sales data.
The target group of this report is the implementation expert (person to configure the Accelerator).
It is mainly used at the beginning of the project. Changes to dimensions usually occur very rarely.

If a dimension is set to inactive, the following happens:

1. In planning and analysis reports, the combo boxes will be hidden.
2. By uploading sales actuals or budget data, the data will be written to the dummy element "~".

The dimensions are not removed from the cube as they might be activated at a later point.



Implementation hint:

1. Information is stored in cube "_dimension control" in attribute "isActive".
2. If this functionality feels not sufficient (which should be for most projects), and a dimension should be added to the cube or removed from the cube, check out the configuration chapter for "Setup dimensions".

3.3.2 Setup dimension structure

The "2. Setup dimension structure" report is to upload elements, hierarchies, and attributes in a user-friendly manner.
The target group are power users and/or implementation experts.

Detailed information can be found in the Foundation documentation.

Implementation hint: This report executes - for Sales relevant dimensions - the jobs in Integrator projects: "SKS_2_Upload_Dimension_FullHierarchy" and "SKS_2_Upload_Dimension_ParentChild".

3.3.3 Upload data

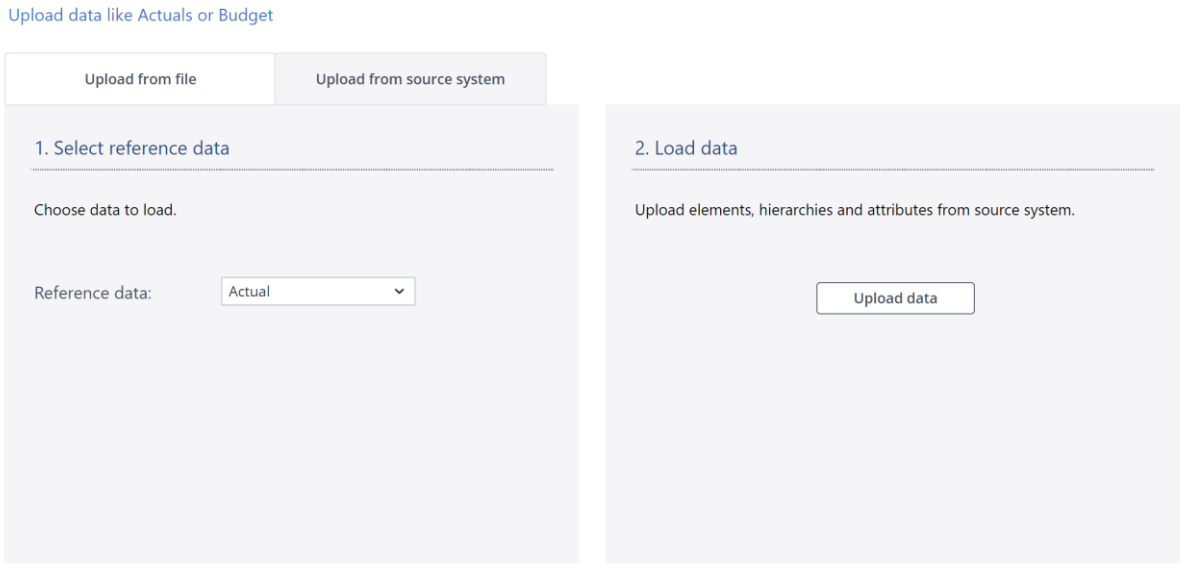
The "Upload data" report is used to upload actuals and budget data.
The target group are power users and/or the implementation experts.

Detailed information on how to upload from file can be found in the Foundation documentation.

Implementation hint: This report executes - for Sales relevant data - the jobs in Integrator projects: "SKS_3_Upload_Data" and "SKS_10_Salesforce".

Upload from source system

1. Dimension: choose dimension to upload from.
   Implementation hint: only dimensions which have an Integrator job added in dimension "_Upload control" in attribute "ETLJobFromSource" will be shown.
2. Upload data: information from Salesforce is loaded to the dimension.
   Implementation hint: the Integrator job for Salesforce can be overwritten by another source/own built Integrator job. This is done in dimension "_Upload control" in attributes "ETLProjectFromSource" and "ETLJobFromSource".

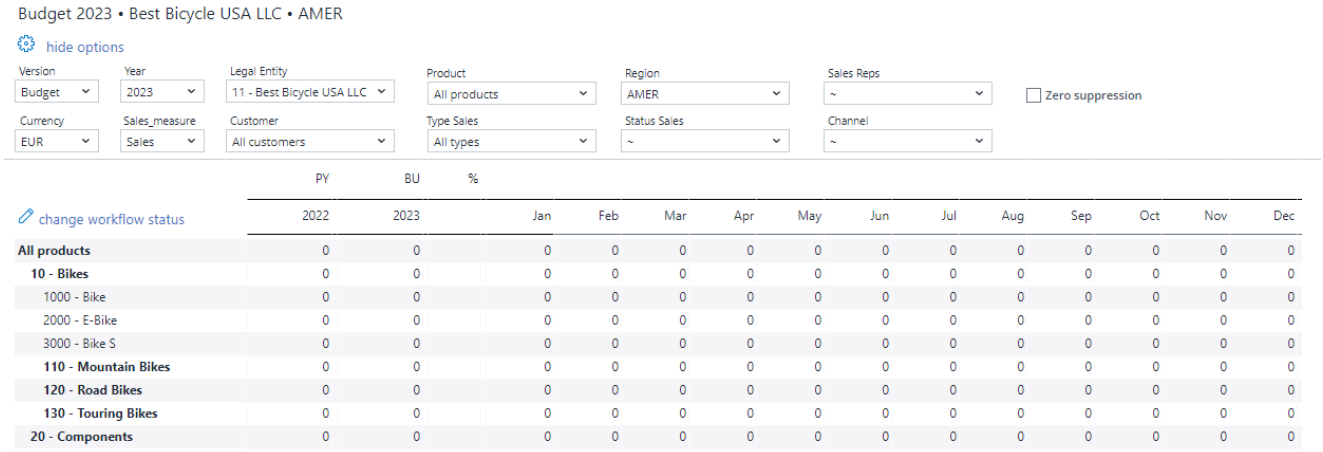


3.4 Planning

This chapter describes all reports in section Planning.

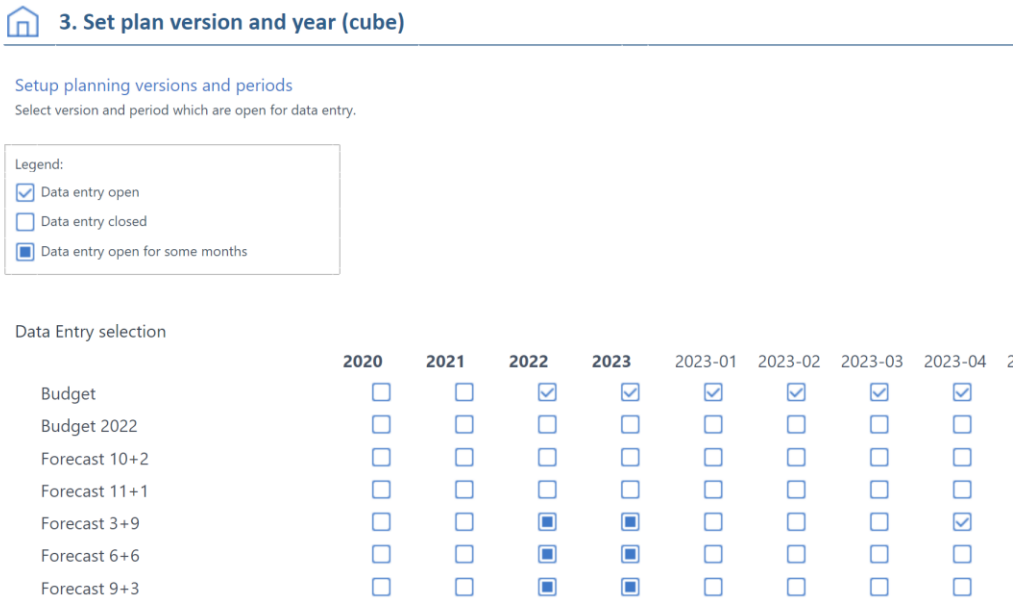
3.4.1 Sales planning

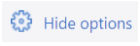
The "Sales planning" report is aimed to plan sales data on month and year level.
The target group are end users.
Only combo boxes which are activated in "Define dimensions" report are shown. Otherwise, the data will reference to the default element "~".
Different measures can be chosen in combo box "Sales_measure", like Sales, Quantity, Price.
Last column Year-to-go is only shown for forecasts for data entry.



	PY	BU	%											
	2022	2023		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All products	0	0		0	0	0	0	0	0	0	0	0	0	0	0
10 - Bikes	0	0		0	0	0	0	0	0	0	0	0	0	0	0
1000 - Bike	0	0		0	0	0	0	0	0	0	0	0	0	0	0
2000 - E-Bike	0	0		0	0	0	0	0	0	0	0	0	0	0	0
3000 - Bike S	0	0		0	0	0	0	0	0	0	0	0	0	0	0
110 - Mountain Bikes	0	0		0	0	0	0	0	0	0	0	0	0	0	0
120 - Road Bikes	0	0		0	0	0	0	0	0	0	0	0	0	0	0
130 - Touring Bikes	0	0		0	0	0	0	0	0	0	0	0	0	0	0
20 - Components	0	0		0	0	0	0	0	0	0	0	0	0	0	0

The selection in the "Set plan version and year" report and thw workflow status and assignments define which cells are open for data entry. Only if those combinations of version and year are activated and the user group has rights to the assignment e.g. Region "AMER" and the workflow status is "Data Entry" the cells are open.



With the icon 

combo boxes can be hidden or shown.
Based on the selection within the Product combo box the dynarange shows the product selected and all products underneath (children).

Implementation hint: the name of the report can be adjusted either in the "Report Management" report or directly in the "Report" dimension, in "Name" attribute. It is recommended to adjust the name as well in the Integrator project "SKS_0_Create_Database" in extract "dReport_10_CTree".

Currency: only currencies which have a 1 in the "Currency" dimension in the "isActive" attribute are shown. There is no data entry possible for consolidated currency elements like "> EUR" as splashing over multiple currencies is not intended.

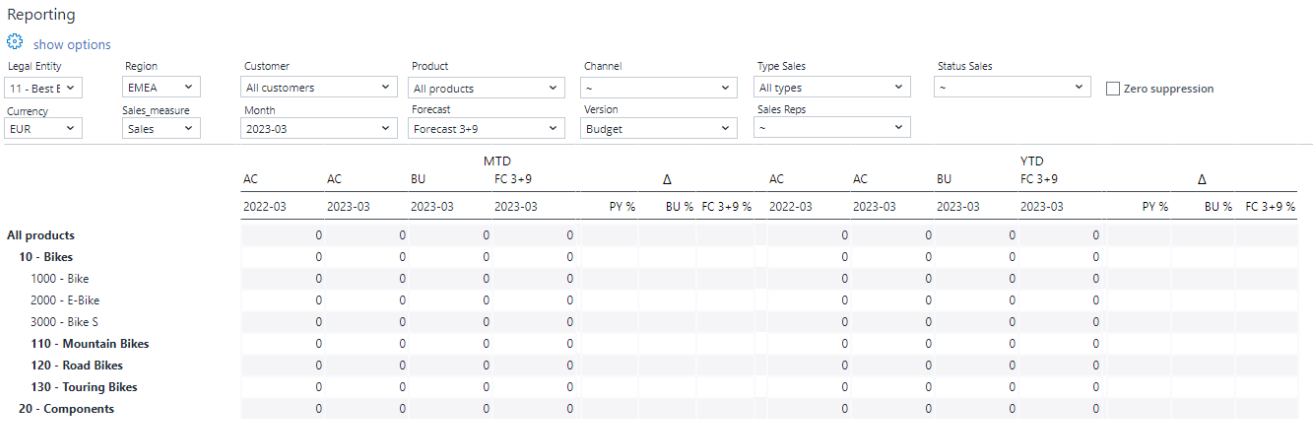
Find more information about when the cells are open for data entry within the Foundation documentation.

3.5 Reporting

This chapter describes all reports in section Reporting.

3.5.1 Analysis

The "Analysis" report aims to compare the planned sales data and actuals.
The target group are end users.
Only combo boxes which are activated in report "Define dimensions" are shown. Otherwise, the data will reference to the default element "~".



The user has two main possibilities:

- Select any version and Month.
- Select a forecast to compare previous year Actuals, Actuals, chosen version like Budget and chosen Forecast like Forecast 3.+9.

4. Data model (database)

In the following chapter the existing dimensions and cubes are described.
The target group of the following chapters are implementation experts and power users with Data Modelling knowledge.

4.1 Dimensions

Within the database model, dimensions have been created to store the data on elements within these dimensions. In addition to dimensions (or elements) for master data, further control dimensions exist, which are used to control report content.

Type	Dimension	Root	Used for	Comment
↖	_Application	No root element, only one element "Sales"	Control cube	Used to specify which version and month combination is open for data entry for Sales. (Option 2 – cube) If more applications should be added, like Profit and Loss, a new element can be added to open another combination.
↖	_Cube control	No root element, contains specific cube names	Control dimension	Used to show in the "Copy version" report in combo box cmbCube only cubes which data should be able to be copied over.
↖	_Dimension control	No root element, contains elements with dimension names like Legal Entity, Customer, etc.	Control dimension	Used for: 1. "Define dimension" report to specify which dimensions are used in the "isActive" attribute; 2. "Setup dimension structure" report, to define which Integrator jobs will run in attributes like ETLProjectFromSource, etc.; 3. "Report Rights" report with "allowDimensionRights" attribute to define which dimensions rights can be set by the power user.
↖	_Upload control	No root element, contains element "Actuals"	Control dimension	Used for: 1. "Upload data" report to define which upload possibilities there are and which Integrator jobs will run in attributes like ETLProjectFromSource, etc.
↖	_VersionMonth-Control_measure	No root element, contains element "Open"	Control cube	Used to specify which version and month combination is open for data entry.
↖	Channel	No root element at the beginning, only tilde. Could entail: → **All channels**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer.
↖	Currency	→ **All Currencies** ↳ **> EUR** ↳ **> USD**	Data cube	Contains some currencies. More can be found in Excel sheet to upload in the Designer in folder Models > Accelerator Sales > Files.
↖	Customer	No root element at the beginning, only tilde. Could entail: → **All customers**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer.
↖	Legal Entity	No root element at the beginning, only tilde. Could entail: → **All Legal Entities**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer.

↖	Month	→ **All months** ↳ All months_YTD ↳ All months_YTG	Data cube	Contains all years and months and parallel hierarchies for Year-to-date and Year-to-go hierarchies.
↖	Product	No root element at the beginning, only tilde. Could entail: → **All products**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer.
↖	Region	No root element at the beginning, only tilde. Could entail: → **All regions**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer.
↖	Report	→ **All reports**	Control cube	All reports to control which reports are published (shown to end user) and used in the "Report_Management" cube to control which user group can see which report. Setup in reports "Report Management" and "Report Rights".
↖	Sales Reps	No root element at the beginning, only tilde. Could entail: → **All Sales Reps**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer.
↖	Sales_measure	Sales Quantity Price Comment	Data cube	Measure dimension for Sales cube. Additional KPIs can be included here.
↖	Status Sales	No root element at the beginning, only tilde. Could entail: → **All Status**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer. Can be used for Won, etc.
↖	Type Sales	No root element at the beginning, only tilde. Could entail: → **All Types**	Data cube	Contains only dummy element tilde at the beginning until it is set up by the implementer. Can be used for types like New Business, Existing Business, etc.
↖	Version	Actual Budget Forecast 3+9	Data cube	Contains all Versions

Legend

Type	Name
↖	Dimension
→	Root of Top-Element
↳	Root of Parallel-Hierarchy

4.2 Cube structure and construction

This chapter describes the cube structure. It helps to decide if the Accelerator should be implemented.

4.2.1 Overview of existing cubes

The following table describes all existing cubes to store transaction data and controlling cubes:

Name	Type	Comment
Sales	Transaction data	Used to store sales actuals and planning data, like budget and forecast.
Report_Management	Cube control	Access to reports by user group are stored within this cube. Used in “Report rights” report. Defines which user group can see which report.
_VersionMonthCon-trol	Cube control	Controls which version and months combination are open for data entry. Can be set in “Set plan version and year (cube)” report.

4.2.1 Cube design

The following shows the cube design.

Type	Name
❒	**Sales**
↖	Version
↖	Month
↖	Legal Entity
↖	Product
↖	Customer
↖	Region
↖	Sales Reps
↖	Channel
↖	Type Sales
↖	Status Sales
↖	Currency
↖	Sales_measure

Type	Name	Type	Name
❒	**_VersionMonthControl**	❒	**Report_Management**
↖	Version	↖	#_GROUP_
↖	Month	↖	Report
↖	_Application		

↖	_VersionMonthControl_measure		

Legend

Type	Definition
❒	Cube
↖	Dimension

1. Business logics (rules)

This chapter describes business logics (rules).
The target group of this chapter are implementation experts and power users with rules knowledge.
Implementation hint: deactivating unnecessary rules increases performance; therefore, check if all rules are needed.
Rules can be checked in Modeler > Database > Cube > Rules.

1. Calculate sales amount
   ['Sales_measure':'Sales'] = B:['Sales_measure':'Quantity'] * ['Sales_measure':'Price']

   Implementation hint: it is set to inactive after the installation of the model Accelerator Sales. If the rule has been created using the Integrator project "SKS_0_Create_Database_Initial" and the job "**cSales_CreateRules_sJob**" the rule will be active and can be deactivated if not needed. Adjust the rule to your needs.

2. Calculate local currency to reporting currency
   Let's assume the reporting currency is EUR.
   This following rule checks first if the "Currency" attribute is filled in the "Currency" dimension and, if yes, divides the value stored on element LC by the exchange rate from the Exchange Rates cube.

   ```
   ['Currency':'${Element}', 'Sales_measure':'Sales'] =
   B: IF(  // For legal entities having a non-empty Currency
            '#_Legal Entity'['#_Legal Entity_':'Currency'],
                     // Divide the local currency by the exchange rate
                     ['Currency':'LC'] /
                    PALO.DATA("", "Exchange Rates", !'Version', !'Month', "Average",          '#_Legal Enti-
                    ty'['#_Legal Entity_':'Currency'], "${Group1}", "Exchange Rate"  ),
   CONTINUE() )
   ```

   This rule is a rule template. That means it shows one rule but creates in the background similar rules. It converts currency from LC of the Legal Entity to ${Group1} using the Conversion Type "Average". The ${Element} is a variable and will be filled with the elements "LC > EUR" and "LC > USD". The ${Group1} will be automatically filled with "EUR" and "USD".
   Implementation hint: this rule can be deactivated if planned data is not stored on local currency, but on the currency like EUR, USD, etc.

3. Calculate foreign currency to reporting currency
   Let's assume the reporting currency are EUR and USD.
   This following rule checks first if there are any values to calculate, then it divides the value stored on element GBP, JPY, etc. by the exchange rate from the Exchange Rates cube.

   ```
   ['Currency':'${Element}', 'Sales_measure':'Sales'] =
   B: IF( //Check if there are values and calculate only for values e.g. do not calculate 0
   ['Currency':'${Group1}'],
   // Divide the input currency by the exchange rate
         ['Currency':'${Group1}'] / PALO.DATA("", "Exchange Rates", !'Version', !'Month', "Aver-
         age","${Group1}", "${Group2}", "Exchange Rate"),
   CONTINUE())
   ```

This rule is a rule template. That means it shows one rule but creates in the background similar rules. It converts different currencies to multiple other currencies using the Conversion Type "Average". The ${Element} is a variable and will be filled with the elements “GBP > EUR”, “JPY > EUR”, “GBP > EUR”, “JPY > USD” etc.
The ${Group1} will be automatically filled with “GBP” and “JPY”, etc. and the ${Group2} will be filled with “EUR” and “USD” as target currencies.
Implementation hint: this rule can be deactivated if planned data is not stored on each currency, but on the element LC (local currency).

2. Sales KPIs

This chapter describes which KPIs are included in the Accelerator and how to implement some additional Sales KPIs.
The target group of this chapter are power users and implementation experts.

4.3 Sales forecasting

Forecasting is planned with the version Forecasts, like Forecast 3+9, Forecast 6+6, etc. Use the existing or create additional forecasts using the “Setup dimension structure PC/FH” report. With the “Copy version” report and the “Forecast Initialization” button, the data will be prefilled.
Example: with Forecast Initialization the following happens:

1. For the selected first months (2022-01, 2022-02 and 2022-03) the sctual data is copied to version Forecast 3+9.
2. And the last months (2022-04, 2022-05, etc.) for the selected version like Budget will be copied to Forecast 3+9.

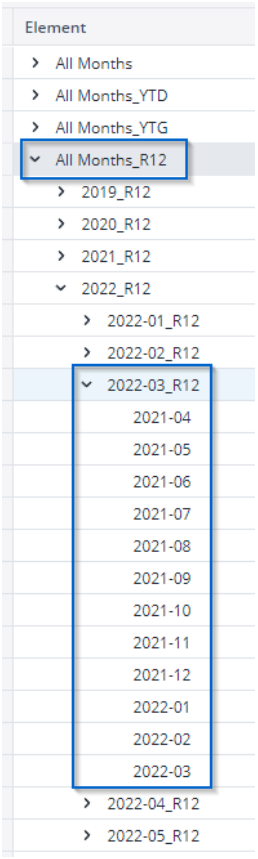
Find out more in chapter “Version Management” (report) in documentation “Accelerator”.

4.4 Year-end projections

The year-end projections are part of the Accelerator. Using the “Copy version” report the actuals and all planning versions can be copied to another version and period. Find more information in chapter “Version Management” (report) in documentation “Accelerator”.

4.5 Rolling sales forecast

Rolling forecast is part of the Accelerator. It can be shown in views or linked to new reports by selecting the rolling period (parallel hierarchy) within the “Month” dimension.



In a view, some aggregated data is shown:

Sales

Budget · Total Group · All Regions · 1000 · New business · EUR · Sales

localhost/Accelerator	Version	Legal Entity	Region	Customer	Type Sales	Currency	Sales_measure	
Sales	Budget	**Total Group**	**All Regions**	1000	New business	EUR	Sales	
	2022-04_R12	2021-05	2021-06	2021-07	2021-08	2021-09	2021-10	2021-11
All products	25,062,000	1,440,000	1,512,000	1,584,000	1,728,000	2,440,000	2,318,000	1,940,000

Implementation hint: the rolling period is updated (add new year) with the Integrator job "dMonth_and_Day_sJob", which entails the load "dMonth_R12_Rolling12_50_LD".

4.6 Top-down and bottom-up planning

The top-down and bottom-up approaches are archived by using the "Dimension rights" report to set up which user group has access to which level.
Example:
Let's assume the rights are set based on the Sales Reps team, which looks like follows:
All sales reps
- APAC
  - Team member 110
  - Team member 111
  - Team member 143
- AMER
  - Team member 201
  - Team member 202

EMEA

Team member 467

- CEO has access to all Sales Reps within the dimension Sales reps. So no access set here as default right is D – Delete (can plan data).
- Sales area lead has only access to the team APAC. In this case, Sales area lead gets right N for the element "All sales reps" and right D for "APAC". If he/she/they should see other teams, the right on "All sales reps" should be R instead of N.
- Team member 111 is only allowed to change their own numbers. In this case, the team member gets right N for the element "All sales reps" and right D for "Team member 111". Same for the team member: if other teams should be seen, the right on "All sales reps" should be R instead of N.

With this rights management the CEO can enter numbers either by splashing or planning each team member/team. The Sales area lead can only see and plan his team. The team member sees and plans only his/her/their target.

4.7 Sales territory planning

Sales territory planning can be done using the "Region" dimension. All regions can be easily uploaded using the "Setup dimension structure" report.

4.8 Scenario planning

Scenario planning can be done and is recommended using different versions. It could be added with an additional "Scenario" dimension, but as experience shows, it leads to more possibilities to store data and is often not used for version. Therefore, it is recommended to add a version "Budget best case 2022" and "Budget worst case 2022".

4.9 Multi-currency support

The multi-currency support is available with two different solutions:
In this context, a reporting currency is the currency with which all legal entities can be compared. Therefore, data of different currencies will be converted to this reporting currency.

1. Let's assume the reporting currency is EUR.
   Enter all plan data to Currency "LC" (Local Currency) and it will be calculated to "LC > EUR". Therefore, GBP, JPY, USD, EUR, etc. will be entered to LC and be calculated to EUR and can be viewed in Currency element "LC > EUR".
   The currency is defined within the "Legal Entity" dimension in the "Currency" attribute.

   Tips & Tricks: this allows us to enter all data to one element and without the need to adjust the element while planning different legal entities. The disadvantage is it may not be to all users always clear which currency is being planned currently.

2. Let's assume the reporting currency is EUR and USD.
   Enter plan data in each Currency. Therefore, GBP will be entered to GBP, JPY to JPY, etc. The data will be calculated to the Currency element "GBP > EUR" and "GBP > USD". And to "JPY to EUR" and "JPY to USD". The overall calculated and not calculated EUR value is seen when selecting the element "> EUR".

   Tips & Tricks: this allows us to see quicker which currency the current data is. It gives the user more confidence about which currency they are currently planning or viewing.

4.10 Additional KPIs

Additional KPIs can be implemented. Find here some instructions how they can be added to the application.

4.10.1 Account segmentation / Classification / Scoring

In this chapter, account segmentation, classification, and scoring are similarly implemented and therefore used as a synonym. It describes which data modelling options can be used and how to implement them.

4.10.1.1 Target options for account segmentation / classification and scoring

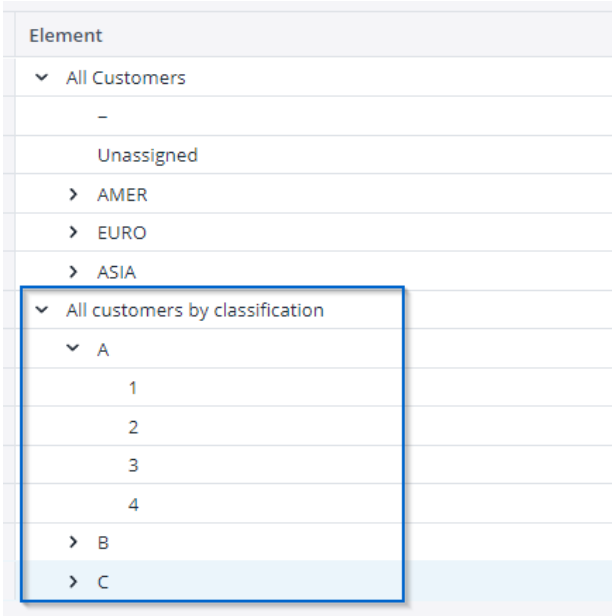
There are multiple data modelling possibilities to implement the account segmentation / classification / scoring:

1. Either by adding an **attribute** in the customer dimension to be filled with the segmentation like A, B and C:

Element	Type	Parent element	Weight	Name	ID_Name	Classification
All Customers						
–	123	All Customers	+1			
Unassigned	123	All Customers	+1			
AMER		All Customers	+1	Americas		
CA		AMER	+1	Canada		
1	123	CA	+1	Another Sporting Goods C...		A
2	123	CA	+1	Basic Sports Equipment		A
3	123	CA	+1	Central Discount Store		A
4	123	CA	+1	City Cycling		A
5	123	CA	+1	Commendable Bikes		C
6	123	CA	+1	Elite Bikes		B
7	123	CA	+1	Exclusive Bicycle Mart		B
8	123	CA	+1	Fun Toys and Bikes		C
9	123	CA	+1	Future Bikes		C
10	123	CA	+1	Locks Company		B
US		AMER	+1	United States		
EURO		All Customers	+1	Europe		
ASIA		All Customers	+1	Asia		

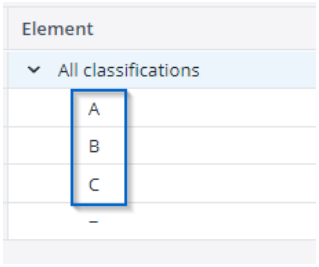
   Tips: it can be easily added, filtered in a subset / dynarange using an attribute filter, or checked in more detail using virtual dimensions.

2. By a **hierarchy or parallel hierarchy** within the customer dimension:

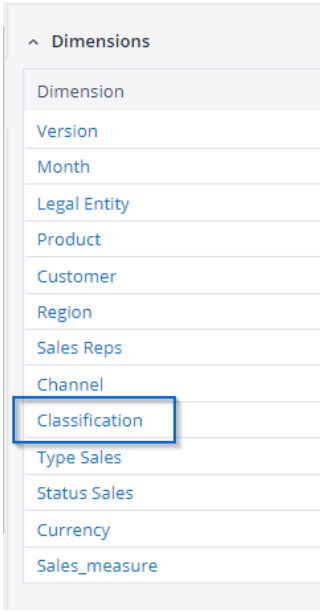


Tips: KPIs can be easily consolidated by classification, simple to understand as an end user and within PasteViews, no need to use virtual dimensions. They can be easily added using the correct load mode – if uploaded in parallel like "InsertParallel".

3. An additional dimension with the three elements: A, B, and C.
   The dimension would look like this:



The cube looks like follows:



Tips: KPIs can be easily filtered and consolidated by classification, simple to understand as an end user and within PasteViews, no need to use virtual dimensions. A new dimension must be created and added to the cube, so all existing Palo.data formulas in planning and reporting reports need to be adjusted and Integrator jobs for Upload data.

4.10.1.2 Implementation guide

How to calculate the segment / classification / scoring value:

1. Extract the relevant KPIs to define the classification* like sales data.
2. Optional: create a FieldTransform to calculate additional KPIs based on the extracted KPIs.
3. Create a TableView to sort the data by the classification value (either the calculated one or e.g. sales data) to find the top customers.
4. Optional: create a FieldTransform with a row number.
5. Within the FieldTransform, depending on the row number or on the KPIs, set with a function groovy (or map) the account segmentation to A, B, or C.
   Trivial example 1:
   - Set A: sales >= 1 mio
   - Set B: sales < 1 mio and > 500k
   - Set C: all other customers

Trivial example 2:

Set A: row number <= 15 (Top 15 customers)
Set B: row number > 15 and < 100
Set C: all other customers

6. As mentioned, different targets can be set to see the segmentation / classification / scoring. Either write the information to an attribute or create the hierarchy based on the outcome or use an additional dimension with the elements A, B, and C:
    1. Attribute solution: either load the segmentation to the attribute cube or use a dimension load with load mode element and consolidation to inactive and attribute add.
    2. Hierarchy solution: create a TreeFH to set up the hierarchy with the levels "All customers", "Classification" (A, B, C), "Customers". Load information using a dimension load.
    3. Dimension solution: write sales data to the relevant classification, that is, sales from the A customer will be written to the element "A" and sales from the B customer to the element B, etc.

* The classification is used here as a synonym for segmentation and scoring, as those are similarly implemented.

4.10.2 Sales costing

Add a new KPI Sales costs in the Sales_measure dimension and upload data to this KPI. The "Upload data" report can be used to upload sales costs.

4.10.1 Customer acquisition costs

Add a new KPI "Customer acquisition costs" or "Acquisition costs" in the dimension Sales_measure and upload data to this KPI. The "Upload data" report can be used to upload the acquisition costs.

4.10.2 Pipeline management

Pipeline management can be implemented:

1. Using the "Status Sales" dimension with elements like "Won" for all sales opportunities which are incoming, a dummy element like "~" for all which are unsure, and an element like "Lost" for all opportunities which are not in the pipeline if this should be compared.
2. To store the effective date, create a dimension like "Due date" including years, months, and days.
    a. To load the data from Salesforce to a cube, make the following adjustments: in the Integrator project "SKS_Salesforce" the FieldTransform "cActuals_40_FT" for the standard job "Actuals_ sJob" by adding there an additional target input for the "Due date". And add the effective date column in the Salesforce Extract, like in extract "cActuals_Opportunity_10_ESalesforce".
    b. To load the data from a file to a cube, make the following adjustments: in the Integrator project "SKS_3_Upload_data" the FieldTransform "cSales_20_FT" for the standard job "cSales_Version_sJob" by adding there an additional target input for the "Due date". Beware that this standard job is uploading data for actuals and budget. Implementation hint: if the actuals differ from the budget uploaded, that is, actuals do have an effective date but the budget doesn't, it is recommended to **duplicate all** Integrator components of the standard job "cSales_Version_sJob" rename one job to "cSales_Actuals_sJob" and the other to "cSales_Budget_sJob". With all components duplicated, it is possible to adjust the actuals job without influencing the budget load.

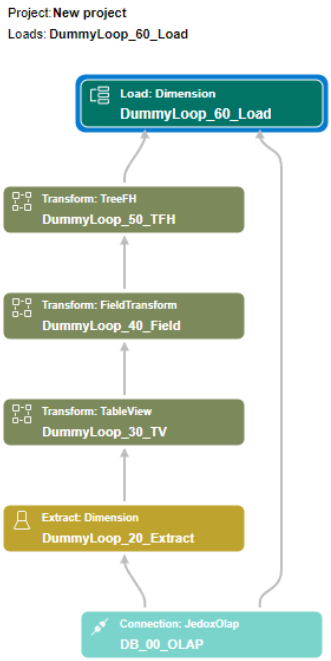
    Additionally: to define which load should be executed, go to the Modeler to the "_Upload control" dimension and adjust the "cSales_Version_sJob" attribute to the renamed jobs.

4.10.3 Planning on different level than actuals

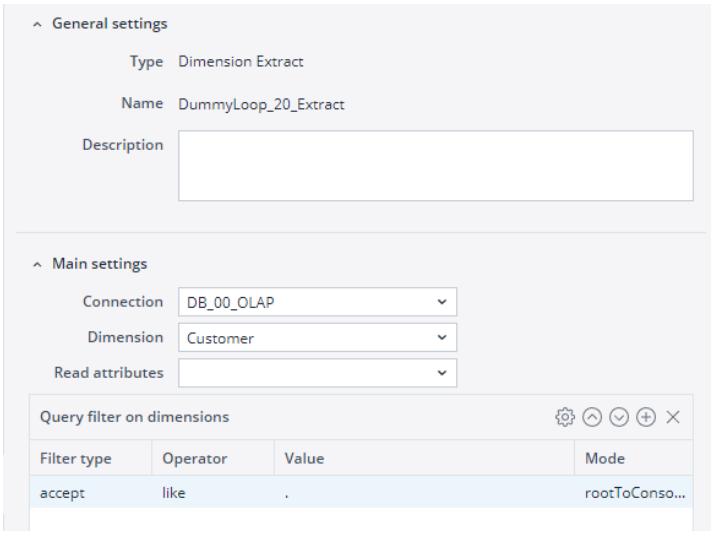
This chapter is for the target group implementation experts.
For planning data on a higher level than actuals, it can be archived by adding a dummy element under all consolidated levels for this specific dimensions.

Example:
All products
- Product group A
  - Product A
  - Product B
  - **Product group A~** -> This is a dummy element.
- Product group B
  - Product C
  - **Product group B~**
- Product group C
  - Product special group CA
    - Product D
    - **Product special group CA~**
  - **Product group C~**

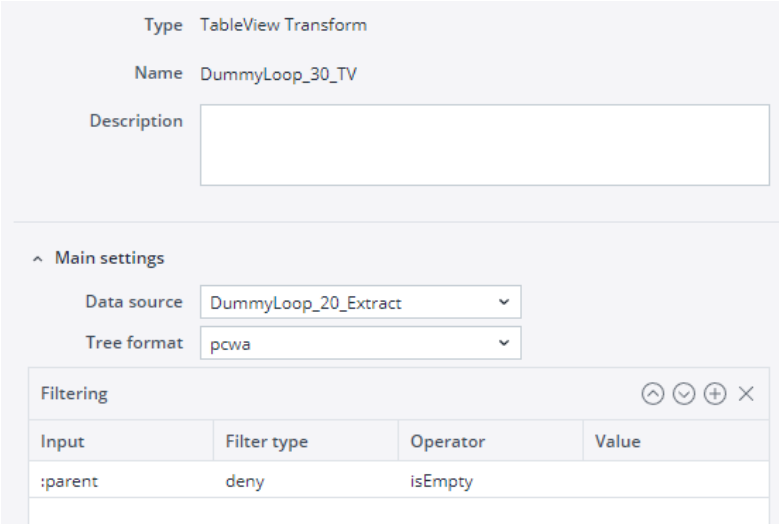
This hierarchy can be achieved by creating first the hierarchy without dummy elements and then executing an additional Integrator loop:



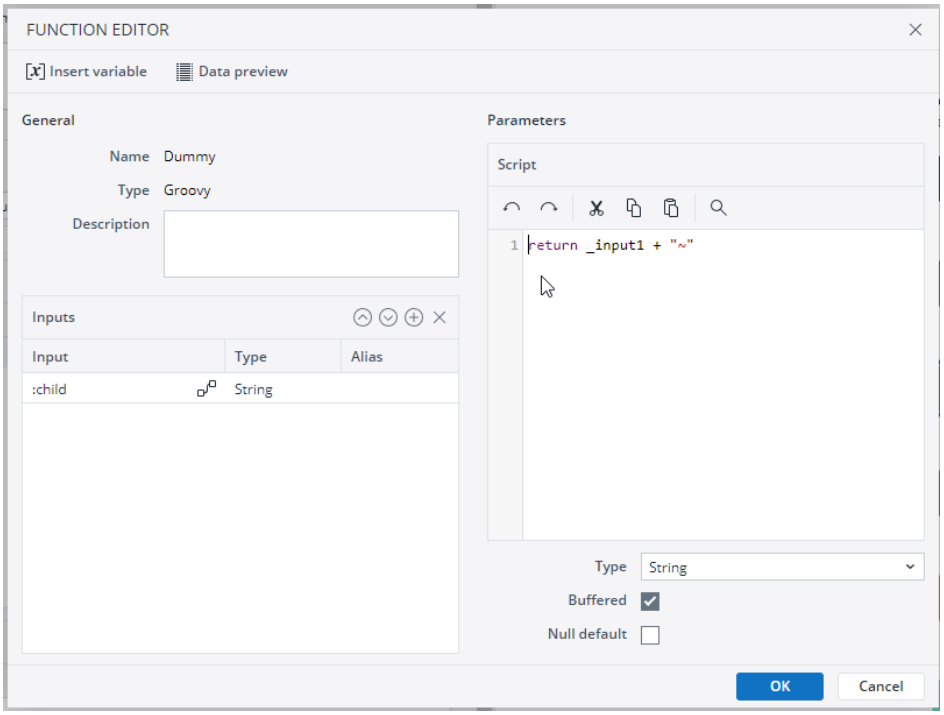
Creating a dimension extract:



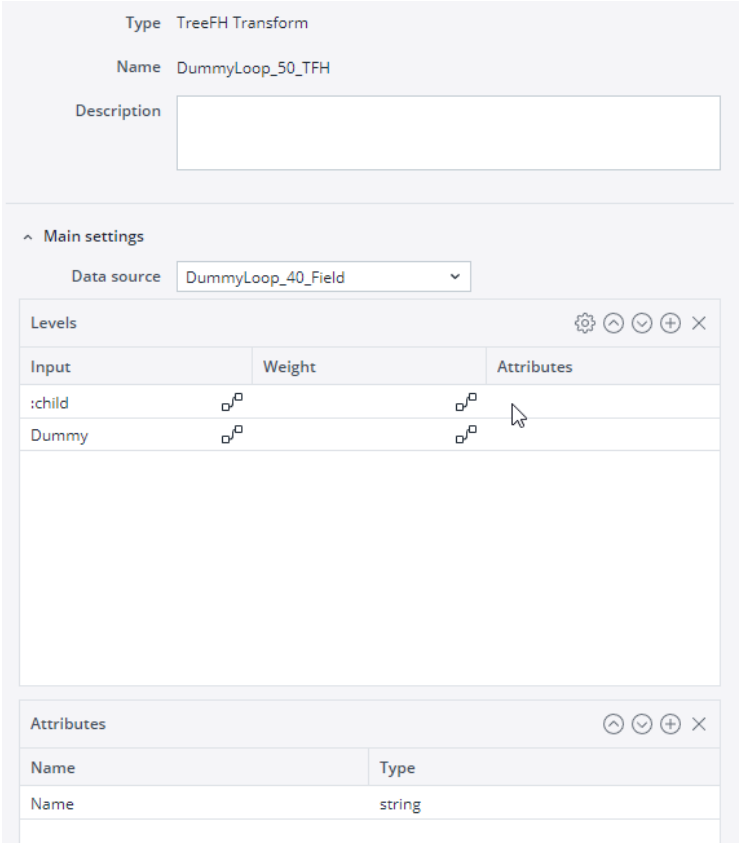
TableView to remove top parents:



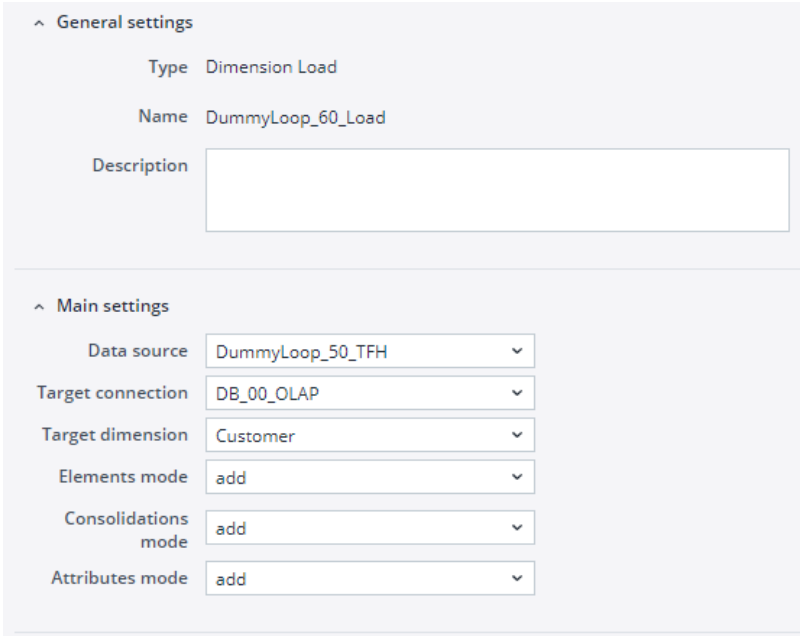
A FieldTransform with one Groovy function:



A TreeFH to setup the new hierarchy:



And last but not least, a load job with the correct load mode:


General settings
Type
Dimension Load
Name
DummyLoop_60_Load
Description
Main settings
Data source
DummyLoop_50_TFH
Target connection
DB_00_OLAP
Target dimension
Customer
Elements mode
add
Consolidations mode
add
Attributes mode
add

3. Integrator projects

This chapter describes all Integrator projects (bundle of automated processes).
The target group of the following chapters are implementation experts or power users with Integrator knowledge.

6.1 Integrator project "SKS_00_Create_database"

This Integrator project creates the database. It includes jobs like:
- Setting up the "Month" dimension by using calendar extracts. It can be regularly reused for adding new years and months, etc.
- Setting up the dimensions: "Report", "_Application", "_Configuration_Input", "_Dimension control", "_Upload control". It uses Contant Trees and constant tables and can therefore be used to extend the dimension by adding additional elements in those constantTrees/Tables.
- Setting up dimensions Version and Currency: both get data from an Excel file. If more should be added, this can be done within an Excel file.

To create the database, execute the following jobs:

3. In Integrator project "SKS_0_Create_database" the job "**dMasterData_sJob**" is the overall job to create all dimensions. It executes an external job also in Integrator project "SKS_0_Create_database_Initial" to create dimensions with a dummy element.
4. In Integrator project "SKS_0_Create_database" the job "**cFactData_CreateCubes_eJob**" created all necessary cubes. It executed an external job also in Integrator Project "SKS_0_Create_database_Initial" to create cubes.
5. In integrator project "SKS_0_Create_database_Initial" the optional job "**cSales_CreateRules_sJob**" creates a rule: Quantity * Price = Sales. Once the job is executed, the job is active. Please check if this rule is needed and therefore should set to inactive/deleted or adjusted according to requirements of the customer.

6.2 Integrator project "SKS_10_Upload_dimension_FullHierarchy"

This Integrator project is used in the "Upload dimension structure" report when file structure "Full hierarchy (FH)" (Combobox) is chosen.

It has 4 main functions:
1. Extract elements and hierarchies to a file with format full hierarchy structure (FH).
2. Extract elements and attributes to a file with format element and attribute (EA).
3. Extract file (filled by the user) using FH to retrieve the elements and hierarchies and update the structure in the respective dimension.
4. Extract file (filled by the user) using EA to retrieve the elements and attributes and update attributes in the respective dimension.

6.3 Integrator project "SKS_10_Upload_dimension_ParentChild"

This Integrator project is used in the "2. Upload dimension structure" report when file structure "Parent child (PC)" (Combobox) is chosen.

It has 2 main functions:
1. Extract elements, hierarchies, and attributes to a file with format parent child structure (PC).
2. Extract file (filled by the user) using PC to retrieve the parent(s), children and attributes and update structure and attributes in the respective dimension.

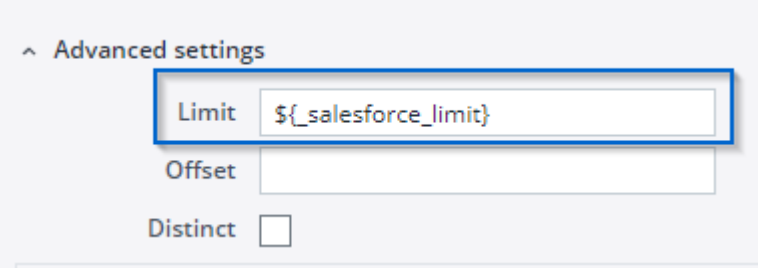
6.4 Integrator project "SKS_20_Upload_data"

This Integrator project is used in the "4. Upload data" report to upload e.g. actuals from a file to a cube.

6.5 Integrator project "SKS_10_Salesforce"

This Integrator project is used to:
- Upload elements, hierarchies, and attributes from Salesforce to dimensions.
- Upload actual data from Salesforce to the Sales cube.

Important: all Integrator jobs loading data from Salesforce have a limit implemented, as Salesforce allows users only a specific amount of data to be extracted. The variable "_salesforce_limit" defines the limit. That means if 1000 is entered for this variable the extract will extract 1000 rows from Salesforce.
To see the limit, go to any Salesforce Extract (SalesforceObject) and view the Advanced Settings:



Solutions for loading more data without any errors:

6. **Option 1:** implement a loop (Groovy/loop job) to load less data in one go. Example: instead of extracting and loading 3 years at once, load month after month.

Groovy example for a loop with variable "Month":

```
//get columns of months
source = API.initSource("dMonth_10_Cal");

//load each month
while (source.nextRow()) {
    //get month e.g. "2022-01"
    month = source.getColumnString("month");

    //set variable "Month"
    API.setProperty("Month", month);
    //Show month in monitor
    LOG.info("Load month: " + API.getProperty("Month"));

    //load month
    API.executeLoad("cActuals_30_LD");
};
```

7. **Option 2:** extract all data from Salesforce and load directly to an SQL database or an Excel/CSV file without any changes. And extract from this SQL or Excel/CSV file data to load to Jedox.

8. **Option 3:** if it is a nightly load use a functionality sleep() in between loads.

6.6 Integrator project “SKS_99_Sample_Data”

This integrator project is used to upload sample data.
It creates some sample dimension elements for legal entities, Products, customers, type sales.
It loads sample Actuals, Budget and Forecast.
The sample data is stored in the Designer in the report folder: "Models" > "Accelerator" > "Accelerator Sales" > "Files" > "Sample_data".

The job “Sample_data_Sales_Upload_sJob” can be executed as long as within this environment are no customer live data. No variables need to be set beforehand.

5. Glossary

This chapter describes abbreviations and wording.

Term	Description
BI	Business Intelligence
CPM	Corporate Performance Management
EA	Element attribute structure – a logic to create a dimension structure. Example: Element (Product ID: 10475), Name (Product Name: Bike)
End user	A professional expert on customer side who uses the Jedox software. This person plans data and might not have been part of the implementation process of Jedox.
EPM	Enterprise Performance Management
ETL	Extract, Transform, Load. Often used as a synonym for Integrator.
FH	Full hierarchy: it is a logic to upload elements, hierarchies, and attributes to a dimension. Example: Level1 (All products), level2 (Product group), level3 (Product) Alternative: check out PC and EA.
Implementation expert	A person to build/setup/adjust/implement/configure the Accelerator. A Jedox expert with knowledge about data modelling (setup databases), Integrator (automated processes), business logics (rules) and reporting.
Measure	A measure is a KPI and usually stored within a measure dimension like Foundation_measure.
Model	A model is a solution with prebuilt content like reports, database, and automated processes (Integrator process) with Jedox. It can be installed either through the Marketplace by clicking on one of the solutions or by using a .jdxp file (which is a model as well).
OLAP	Online Analytical Processing is the technology in Business Intelligence to store data in multidimensional analytical format. This enables flexible and high-performance business reporting, planning, and analyzing data.
PC	Parent Child: It is a logic to upload elements, hierarchies, and attributes to a dimension. Example: Parent (All products), Child (Product group) Parent (Product group), Child (Product) Alternative: check out FH and EA.
Power user	A user of the Jedox software on customer side whose skills and expertise are (will be) more advanced than most other users, especially a person who is assigned additional administrative rights and responsibilities for Jedox. For example: definition of dimension structures, defining source systems, load of data. Usually, attendee in Kick Off workshop.

Reporting currency	A reporting currency is the currency with which all legal entities can be compared. Therefore, data of different currencies will be converted to this reporting currency.
Role	System rights are set across roles. Like granting access to different sections “Designer”, “Modeler” and/or “Integrator”.
Rule	A rule is a business logic, a calculation within the cube which calculates for example measure 1 * measure 2.
User	A user is assigned to a user group. All rights in Jedox are set to user groups or roles. Multiple users can be in one user group. One user can have multiple user groups. In this case the user gets the rights of the most powerful user group.
User group	A user is assigned to a user group and a user group is assigned to a role. Application rights are set across user groups. Like user group controlling has access to database with the Profit and Loss model.
YTD	Year-to-Date. Parallel hierarchy within “Month” dimension. Example: 2022-03_YTD > 2022-01, 2022-02, 2022-03.
YTG	Year-to-Go. Parallel hierarchy within “Month” dimension. Example: 2022-10_YTG > 2022-10, 2022-11, 2022-12.

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