

# Sample Content for Automotive Profitability and Cost Management

Processes and Functions supporting Sample Business Scenarios



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# Typographic Conventions

Type Style	Description
<i>Example</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Textual cross-references to other documents.
<b>Example</b>	Emphasized words or expressions.
<b>EXAMPLE</b>	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade, and database tools.
<b>Example</b>	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
<b>EXAMPLE</b>	Keys on the keyboard, for example, <b>F2</b> or <b>ENTER</b> .

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# 1 Introduction and Basics

## 1.1 About this Guide

This guide provides information about the sample content for Automotive Profitability and Cost Management, which can be installed on top of SAP Profitability and Performance Management. This sample content describes a project accelerator, ideas, and best practices for modeling an end-to-end profitability and cost calculation model that is feasible for actuals, planning, forecasting and simulations. It covers the full contribution margin scheme at a granular product level. It also contains references to further documentation that you should read before performing these tasks.

The structure of this document is organized around the following topic:

### **Business Example**

This part of the guide covers the main features of the sample content. It describes the information model and calculation model.

### **Target Audience:**

- Business experts
- Solution consultants
- Presales teams

### **Considerations**

It is essential that you are familiar with the content of the corresponding guides and documents related to this topic before beginning with this example. For more information about the available guides and documents, as well as integration with other systems, roles, configuration information, users and authorization concept, see [Related Documentation](#).

## 1.2 Constraints

This guide does not provide information about the installation of the sample content. For more information about this, see [Related Documentation](#).

## 1.3 Related Documentation

The following table lists related documents.

Topic	Guide/Tool/Title	Links
<ul style="list-style-type: none"> <li>• Installation and planning of your system landscape</li> <li>• Activities to keep the system running</li> <li>• Information about how to ensure the required security for your SAP landscape</li> </ul>	Administration Guide	<a href="#">Administration Guide</a>
<ul style="list-style-type: none"> <li>• SAP Note for Sample content for Automotive Profitability and Cost Management</li> </ul>	Sample content for Automotive Profitability and Cost Management	<a href="https://launchpad.support.sap.com/#/notes/2685567">https://launchpad.support.sap.com/#/notes/2685567</a> SAP Note 2685567
<ul style="list-style-type: none"> <li>• Operation of SAP NetWeaver</li> </ul>	Technical Operations Manual	<a href="https://help.sap.com/viewer/p/SAP_NETWEAVER_750">https://help.sap.com/viewer/p/SAP_NETWEAVER_750</a>
<ul style="list-style-type: none"> <li>• Application Help</li> </ul>	Detailed Application help for SAP Profitability and Performance Management	<a href="#">SAP Profitability and Performance Management</a>
<ul style="list-style-type: none"> <li>• SAP HANA Administration Guide</li> </ul>	Administration guide for SAP HANA; supported SDA databases	<a href="https://help.sap.com/viewer/product/SAP_HANA_PLATFORM/">https://help.sap.com/viewer/product/SAP_HANA_PLATFORM/</a>
<ul style="list-style-type: none"> <li>• SAP Notes</li> </ul>		<a href="https://launchpad.support.sap.com">https://launchpad.support.sap.com</a>

## 1.4 Glossary

<b>ABC</b>	Activity-based costing
<b>BI</b>	Business intelligence
<b>BW</b>	Business warehouse
<b>CM</b>	Contribution margin
<b>GL</b>	General ledger

## 2 Business Example

The market is at the dawn of the next big technology change where everything is connected, and software is embedded in people's lives. This technology change is bringing new opportunities and new threats. Cycle time for innovation is 5–10 times faster, and enterprises can reduce complexity to be more competitive. Business efficiency is ahead of the market and product and service profitability are constantly tracked and optimized.

That is why digital performance management will be the game-changer for companies who want to be successful in the digital economy. A digital performance management solution for 21<sup>st</sup> century business needs to measure and manage enterprise efficiency and drive product and service profitability in real time.

Built on SAP HANA, SAP Profitability and Performance Management is a next generation digital performance management solution that provides breakthrough real-time business data aggregation capabilities for SAP and non-SAP systems, a high-speed finance and risk calculation engine and comprehensive simulation and scenario management.

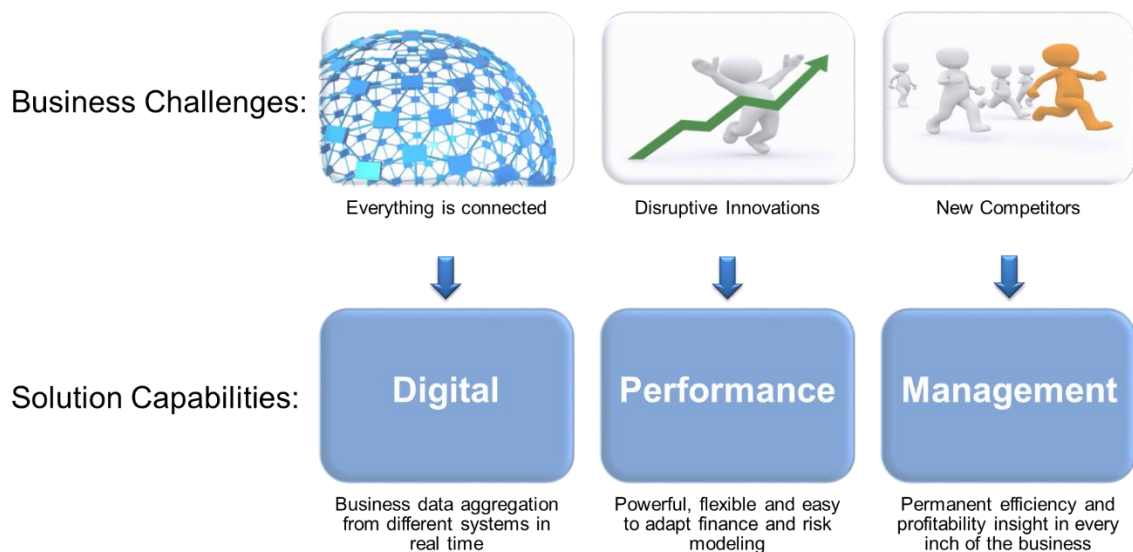


Figure 1: Digital Imperative

## 2.1 Scope and Business Definition

This sample content covers the sample end-to-end profitability and cost process of an enterprise, comprising certain aspects of data integration, data input, processing (including calculations and allocations following an ABC (activity-based costing) approach) as well as reporting.

This allows business users to manage and analyze enterprise profitability and cost in one central solution.

The following screenshot shows the function hierarchy of the sample content and the process template.

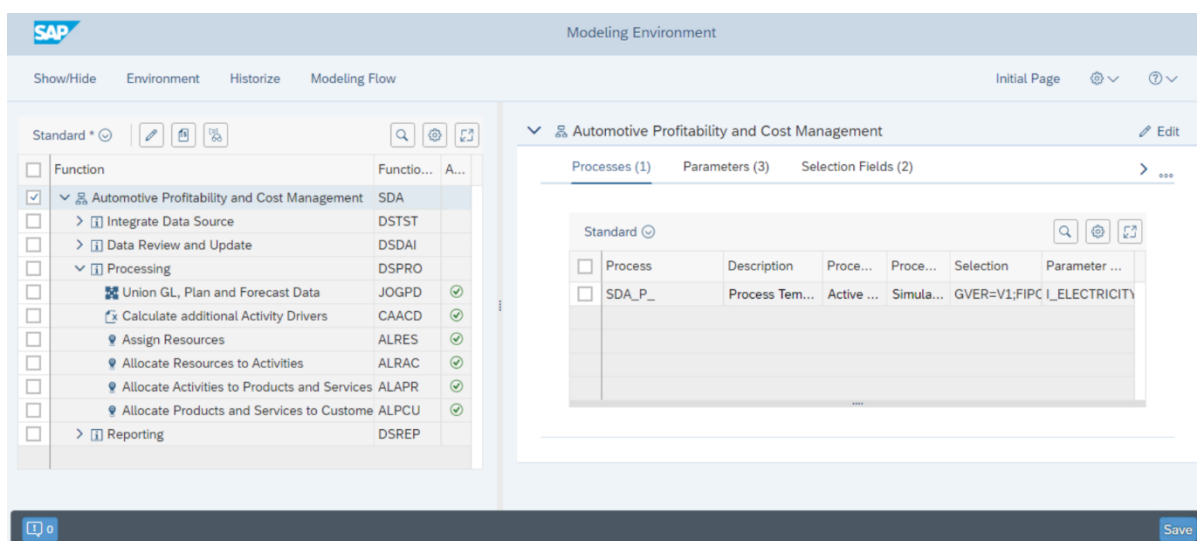


Figure 2: Sample Content Information and Calculation Model

You can also find the information contained in the following chapters on the respective [Documentation](#) tabs for the model.

# 3 Automotive Profitability and Cost Management in Detail

Automotive Profitability and Cost Management is an important task for every enterprise from industries in the area of automotive industry and related products and services with the goal to optimize profitability and to minimize cost by gaining deep insights on granular revenue and cost information on product, channel or customer level.

This sample content Automotive Profitability and Cost Management (Environment ID=SDA, Version=7) covers an end-to-end example of an Activity-based Costing Model applicable for both actual and planning data with the focus on profitability on product & service, channel and customer level. It incorporates a predefined process template with manual data input and automatic calculation activities to run the model in production as well as for what-if simulation purposes.

This sample content comes with the SAP Automotive Profitability and Performance Management Software Installation.

It consists of one Calculation Unit function and is structured underneath by description functions in the following sections:

- *Integrate Data Sources*  
Here the information model for the sources of information is defined and used, previously loaded using Model Writer functions from section Data Review and Update.
- *Data Review and Update*  
This offers specific inputs for plan and forecast data, resource assignments, resource drivers and activity drivers.  
It also includes an optional activity process to collect activity driver information.
- *Processing*  
Here the core of the calculation model is defined to get to a complete multidimensional P&L on granular level.
  - The union of General Ledger with Plan and Forecast data
  - The calculation of activity data that usually comes from source systems with the aggregated and weighted activity data with specific drivers
  - The assignment of General Ledger accounts to resources
  - The allocation of resources to activities
  - The allocation of activities to products & services
  - The allocation of products & services to customers, channels, and regions
- *Reporting*  
It provides one review report for the P&L, plus several specific reports for results on activity and product level as well as a value flow report, which gives the user end-to-end traceability from resources through all applied drivers to the final result.

The *Automotive Profitability and Cost Management* Calculation Unit defines the Process template **SDA\_P\_ - Process Template** with the following activities for execution users:

- **Review Input Data:**
  - *Review General Ledger Data*, where you can check the GL data used in the process.
- **Update Assumptions:**
  - *Update Plan and Forecast Data*, where you can apply plan and forecast data changes.
  - *Update Resource Assignments*, where you decide which GL accounts are allocated to which resources. It also allows you to transfer only a specific percentage from a GL account or to spread the GL account value across various resources.
  - *Update Resource Drivers*, where you can apply changes to the allocation logic if needed.
  - *Update Activity Driver Data*, where you can apply changes to the allocation logic if needed.
- **Execute Calculation:**
  - *Allocate Products and Services to Customers, Channels and Regions*, which is the last function of allocations.
- **Reporting:**
  - *Net Profit Margin per Products and Scenario (%)*, which shows Net Profit Margin for every Product and Service with a predefined layout.
  - *Review Products by Regions*, which shows results by Products and Regions with predefined layout.
  - *Quarterly Net Profit Margin per Product Groups (%)*, which shows Net Profit Margin for every Product and Service with a predefined layout.
  - *Review Product Profitability by Sale Channels*, which shows Product and Service results categorized by Sale Channels.
  - *Return on Investment per Products and Scenario (%)*, which shows Return on Investment in percentages for every Product and Service with a predefined layout.
  - *Review Profit Center Utilization*, which gives read-only access to the profit and loss results on Profit Center.
  - *Review Results*, which gives read-only access to the profit and loss results with a predefined layout.
  - *Review Results (Side by side simulation)*, which provides read data access to the profit and loss results with a predefined layout for simulation.
  - *Activity Results*, where you can check activity result reports by quarter.
  - *Review Quarterly Business Unit Results*, which focuses on profit and loss on Business Unit level.
  - *Products and Service Results*, which focuses on the results on Product and Service level.
  - *Value Flow*, which gives read-only access to the granular results with a predefined layout to trace results from resources through all applied drivers and portions to the final allocated amount in one screen.
  - *Review Production by Profit Center*, which gives read-only access to profit and loss results on Profit Center level.

- *Review Channel Profitability by Regions*, which gives read-only access to profit and loss results on Channel and Region level.

#### Note

Please note, that all execution activities are configured without dependency, so that they can be executed in parallel for demo purposes. In implementation projects dependent activities can be defined instead if needed. Please note, that for execution activities no performer and reviewer teams are assigned, that means every execution user can run the activities. In implementation projects teams need to be assigned to restrict the authorizations to relevant users.

Please note, that for the used environment fields, no characteristic based authorization is defined, that means every execution user can read all data and possibly apply data changes. In implementation projects authorizations can be defined on characteristic value level by IT Administrators in line with the general SAP authorization and security management, so that for example in the "Review General Ledger Data" report the company data for "Sunshine New York" is only readable to selected users. Another example would be, that for "Update Plan and Forecast Data" team members can only input data for cost centers, for which they are responsible.

## 3.1 Integrate Data Sources

In this section the necessary data sources are defined. Please note that this Sample Content works with own data and cannot presume any custom specific system landscape, application, or interface.

The integration of data sources uses therefore functions of type Model Table to make test data available in an implementation project to connect to the real and concrete customer data sources and targets.

The complete information model is kept lean to ease the adaption in an implementation project. For example, it assumes just 10 fields as a general ledger data feed, which is enough in most cases and obviously much easier to provide, than if 50 fields or more would be required.

### 3.1.1 General Ledger Data

This Model Table function is used to provide periodic general ledger totals from the relevant accounts.

It defines the following fields:

- *Version*: If you connect a real general ledger, you can enter a fixed value in the *Version* field since there is no variance because a general ledger provides only one version of the truth. This field is included for cases where a "side-car" approach is used and versioned data is provided alongside real general ledger data.
- *Posting Date*: Gives you the flexibility to provide GL totals on a yearly, quarterly, monthly, or daily basis to run the profitability and cost management process.
- *Finance Source*: The field can have different values since the relevant accounting data does not always come from one general ledger in some system landscapes. This field is also available in reporting.

- *Company*: This field can have different values since profitability, cost management is usually executed at controlling area level, which spans multiple companies and legal entities, and the field is available in reporting.
- *Functional Area*: This field allows business segment reporting and drill down.
- *Profit Center*: This field is required because the model incorporates revenue as well as costs. The profit center is the lowest granularity in a company or legal entity that generates profit.
- *Cost Center*: This is the lowest granularity in a company or legal entity where costs are pooled and controlled. The plan and forecast data is often maintained by the corresponding cost center business owner.
- *GL Account*: This field is used to record revenues and costs at a granular level.
- *Amount (TC)*: Amount in transaction currency that represents costs or revenues.
- *Currency*: Transaction currency is the currency used to calculate profitability in the sample content. This is because it is common practice to translate every amount into the same currency so that only one currency (controlling area currency) is used in the complete profitability model.

### 3.1.2 Plan and Forecast Data

This Model Table function is used to provide periodic plan and forecast totals for the relevant accounts.

It defines the following fields:

- *Version*: If you connect a real general ledger, you can enter a fixed value in the *Version* field since there is no variance because a general ledger provides only one version of the truth. This field is included for cases where a "side-car" approach is used and versioned data is provided alongside real general ledger data.
- *Scenario*: The field is used to separate different scenarios.
- *Posting Date*: Gives you the flexibility to provide GL totals on a yearly, quarterly, monthly, or daily basis to run the profitability and cost management process.
- *Finance Source*: The field can have different values since the relevant accounting data does not always come from one general ledger in some system landscapes. This field is also available in reporting.
- *Company*: This field can have different values since profitability and cost management is usually executed at controlling area level, which spans multiple companies and legal entities and the field is also available in reporting.
- *Functional Area*: This field allows business segment reporting and drill down.
- *Profit Center*: This field is required because the model incorporates revenue as well as costs. The profit center is the lowest granularity in a company or legal entity that generates profit.

- **Cost Center:** This is the lowest granularity in a company or legal entity where costs are pooled and controlled. The plan and forecast data is often maintained by the corresponding cost center business owner.
- **GL Account:** This field is used to record revenues and costs at a granular level.
- **Amount (TC):** Amount in transaction currency that represents costs or revenues.
- **Currency:** Transaction currency is the currency used to calculate profitability in the sample content. This is because it is common practice to translate every amount into the same currency so that only one currency (controlling area currency) is used in the complete profitability model.

The function is configured as editable, which allows you to make manual plan and forecast data changes later in the end-to-end process.

### 3.1.3 Resource Assignments

This Model Table function is used to provide periodic assignment data for the relevant accounts to the corresponding resources.

Because the relevant GL accounts in a profitability and cost management process can change quite frequently, it makes sense to decouple them from the more stable calculation model using resources. This also allows you to transfer only an adjusted part of the amount total, and to split GL account values across various resources.

The function defines the following fields:

- **Version:** If you connect a real general ledger, you can enter a fixed value in the **Version** field since there is no variance because a general ledger provides only one version of the truth. This field is included for cases where a "side-car" approach is used and versioned data is provided alongside real general ledger data.
- **Posting Date:** Gives you the flexibility to provide GL totals on a yearly, quarterly, monthly, or daily basis to run the profitability and cost management process.
- **Finance Source:** Defines the source of data with regard to a specific data warehouse or legacy system.
- **Company:** This field can have different values since profitability and cost management is usually executed at controlling area level, which spans multiple companies and legal entities and the field is also available in reporting.
- **Cost Center:** This is the lowest granularity in a company or legal entity where costs are pooled and controlled. The plan and forecast data is often maintained by the corresponding cost center business owner.
- **GL Account:** This field is used to record revenues and costs at a granular level.

- *Resource*: This is the starting point of the calculation model and the resource is referred to in various functions.
- *Adjustment*: Percentage of the GL account total that is to be assigned to a resource.

The function is configured as editable, which allows you to make manual changes later in the end-to-end process.

### 3.1.4 Resource Drivers

This Model Table function is used to provide periodic resource drivers for the relevant resources and activities.

It defines the following fields:

- *Version*: If you connect a real general ledger, you can enter a fixed value in the *Version* field since there is no variance because a general ledger provides only one version of the truth. This field is included for cases where a "side-car" approach is used and versioned data is provided alongside real general ledger data.
- *Posting Date*: Gives you the flexibility to provide plan and forecast totals on a yearly, quarterly, monthly, or daily basis to run the profitability and cost management process.
- *Resource Source*: In some customer system landscapes, the resource driver data comes from multiple systems (such as data warehouses or timesheet systems) or is entered manually. In these cases, the *Resource Source* field has different values and is available in reporting.
- *Resource*: To abstract the data that comes from general ledger systems and planning systems from the profitability model and to make reassignments easier, the resource driver data is based on an explicit *Resource* field instead of the original source system fields (such as *GL Accounts*, *Cost Center*, *Profit Center*). The *Assign Resources* function enriches the original data using the *Resource* field. This means that even if new accounts are added or become obsolete in the underlying GL accounts, you only need to update the resource assignments data and not the calculation model.
- *Resource Driver*: Contains the unit description of the resource (such as pieces, hours, and FTEs).
- *Activity*: Defines the activity that uses the resource value as a variable portion to allocate the resources.
- *Resource Value*: Contains the key figure used to allocate resources to activities and refers to the resource driver as a unit.

The function is configured as editable, which allows you to make manual resource driver changes later in the end-to-end process.

### 3.1.5 Activity Drivers

This Model Table function is used to provide periodic activity drivers for the relevant activities and products & services.

It defines the following fields:

- **Version:** If you connect a real general ledger, you can enter a fixed value in the **Version** field since there is no variance because a general ledger provides only one version of the truth. This field is included for cases where a "side-car" approach is used and versioned data is provided alongside real general ledger data.
- **Posting Date:** Gives you the flexibility to provide plan and forecast totals on a yearly, quarterly, monthly, or daily basis so that you can run the profitability and cost management process.
- **Activity Source:** In some system landscapes, the activity driver data comes from multiple systems (such as data warehouses, timesheet systems or production systems) or it is entered manually. If this is the case, the **Activity Source** field has different values and is available in reporting.
- **Activity:** Activities usually stem from company internal surveys or are already defined in company internal processes.
- **Activity Driver:** Contains the unit description of the activity (such as pieces, hours, and FTEs).
- **Activity Driver Value:** Contains the key figure that is used to allocate activities to products and services and uses the **Activity Driver** field as a unit.
- **Product and Service:** Defines the product or service that uses the activity value as a variable portion to allocate the activities.
- **Business Unit:** Contains the information about business unit, which every product and service relates to.

The function is configured as editable, which allows you to make manual activity driver data changes later in the end-to-end process.

### 3.1.6 Channel, Customer and Profit Center Positions

This Model Table function is used to provide information about sales channels, customers, and profit centers that products and services should be allocated to.

It defines the following fields:

- **Version:** This can be used to separate multiple planning versions from each other.
- **Posting Date:** This field gives flexibility to provide plan and forecast totals on a yearly, quarterly, monthly, or even daily basis to run the profitability and cost management process.

- *Product and Service*: Contains the key figure, which is used to allocate activities down to products & services and it refers to the Activity Driver as a unit.
- *Channel*: Contains the information about sales channel and total sales quantity for each channel and region.
- *Quantity*: This field contains key figures which relate to field Channel and total number of products and services sold for each channel.
- *Profit Center*: This field is necessary because the model incorporates beside costs also revenues and so the profit center is the lowest granularity in a company or legal entity, which have responsibility to generate profit. Up until the moment this model table is used, not every product or service have profit center attached to them. Using this model table, overheads will be allocated to corresponding profit centers.
- *Customer ID*: Contains the information about customer which bought or used our products and services.
- *Currency*: Transaction currency is the currency, which is chosen in the sample content to calculate profitability. No matter, which currency is used in an implementation project, the common practice is to translate every amount into one and the same currency, so that in the complete profitability model only one currency (also called controlling area currency) is used.
- *Quantity Unit*: Contains the information about unit used for selling product or service. In this case, Pieces and Number have been used as information about sold products or services.
- *Geographic Region*: Contains the information about region.

This function is configured as editable, which is a prerequisite to allow manual activity driver data changes in the end-to-end process later on.

## 3.2 Data Review and Update

In this section, you define additional Query functions to enable execution users to conveniently review and maintain data.

In the review and maintenance process, the following activities are run before the profitability and cost management calculation is executed:

- *Review General Ledger Data* provides read-only access to general ledger data.
- *Update Plan and Forecast Data* provides read and edit access to plan and forecast data.
- *Update Resource Assignments* provides read and edit access to assignment data from GL accounts to resources.
- *Update Resource Drivers* provides read and edit access to resource driver data.
- *Update Activity Driver Data* provides read and edit access to activity driver data.

### Note

The edit access queries sometimes provide only a subset of the test data for editing to show-case the function.

### 3.2.1 Review General Ledger Data

This Query function is used to provide read data access to general ledger data, which serves as input for the profitability and cost calculation.

For more information about the fields, see [General Ledger Data](#).

### 3.2.2 Update Plan and Forecast Data

This Query function is used to provide read and edit data access to plan and forecast data, which serves as input for the profitability and cost calculation.

For more information about the fields, see [Plan and Forecast Data](#).

### 3.2.3 Update Resource Assignments

This Query function is used to provide read and edit data access to resource assignment data, which serves as an input for the profitability and cost calculation.

For more information about the fields, see [Resource Assignments](#).

### 3.2.4 Update Resource Drivers

This Query function is used to provide read and edit data access to resource driver data, which serves as input for the profitability and cost calculation.

For more information about the fields, see [Resource Drivers](#).

### 3.2.5 Update Activity Driver Data

This Query function is used to provide read and edit data access to activity driver data, which serves as input for the profitability and cost calculation.

For more information about the fields, see [Activity Drivers](#).

## 3.3 Processing

In this section, you define the core functions of the model used to calculate the profitability and cost results.

This calculation is run after the input data has been reviewed and updated.

It comprises the following functions:

- *Union GL, Plan and Forecast Data*: Combines actual and plan/forecast data into one data stream.
- *Calculate additional Activity Drivers*: Uses the *Union GL, Plan and Forecast Data* and *Activity Drivers* functions as input and calculates an additional activity driver.
- *Assign Resources*: Uses the *Union GL, Plan and Forecast Data* function as input and applies the appropriate resources.
- *Allocate Resources to Activities*: Uses the *Assign Resources* function as the allocation sender and the *Resource Drivers* function as the allocation receiver, on which the allocation of the data is then executed.
- *Allocate Activities to Products and Services*: Uses the *Allocate Resources to Activities* function as the allocation sender and the *Calculate additional Activity Drivers* function as the allocation receiver, on which the allocation of the data is then executed.
- *Allocate Products and Services to Customers, Channels and Regions*: Uses the *Allocate Activities to Products and Services* function as the allocation sender and the *Channel, Customer and Profit Center Positions* function as the allocation receiver on which the allocation of the data is then executed. This function produces the final granular results, including all fields from the original source data and the drivers.

### Note

The calculations described above are run and triggered as one process activity ("Execute Simulation"). This is possible due to the high processing speed and does not require the steps listed above to be executed in batch mode.

The calculations described above were not configured to perform data aggregation or field exclusion. This means that no information is destroyed, and all results are available at granular level, providing complete traceability from the source of revenues and costs through all driver-based allocations down to the final result at product and service level.

### 3.3.1 Union GL, Plan and Forecast Data

This Join function is used to combine actuals, plan and forecast data from different data sources into one stream, to which the same calculation rules are then applied.

Since both the GL data and the plan and forecast data share the same fields and granularity in the rules of this function, a simple union of both inputs is sufficient.

#### Note

No fields are ignored and all information is kept.

### 3.3.2 Calculate Additional Activity Drivers

This Calculation function is used to calculate activity drivers that are not delivered from a source system or entered manually. Instead they can be calculated based on existing driver data.

For demo purposes two rules are maintained:

- **RDIS Manufacturing Activities** (Forging, Welding, Mechanical Processing, Stamping) are selected from existing activity driver data the subset about number of production setups per year.
- In rule **RCALC Cost of Monitoring of Manufacturing Activities** (Forging, Welding, Mechanical Processing, Stamping) are selected and the basis to fill all characteristics and then a simple calculation is done by taking portion of Production Activity Value for using it in Monitoring Activity. This is just a sample of taking any activity as a benchmark for calculating other ones.

#### Note

Please note that the formula **R0001 \* 0,1** looks simple, but actually behind the scene not just one record with one calculation result is produced and added, but instead this calculation is done on granular level, first taking the production activities with the according percentage for internal activities based on the granularity fields defined in the signature tab, then executing the calculation for each matching record and adding all new results to the output. In other words, even if the calculation is defined on a higher level, it is actually executed on the most granular level.

### 3.3.3 Assign Resources

This Allocation function uses the *Union GL, Plan and Forecast Data* function as sender data and allocates it to resources using the *Resource Assignments* function as receiver data.

Here the receiver rule *Variable Portions* is used to allocate the sender data using the *Adjustment (%)* driver from the receiver.

### 3.3.4 Allocate Resources to Activities

The *Allocate Resources to Activities* function uses the *Assign Resources* function as sender data and allocates it to activities using the *Resource Drivers* function as receiver data.

Therefore, only one rule is defined here, which carries out direct allocation (keeping all fields and providing results with a maximum level of granularity). It allocates the amount using the *Resource Value* as a distribution base.

### 3.3.5 Allocate Activities to Products and Services

The *Allocate Activities to Products and Services* function uses the *Allocate Resources to Activities* function as sender data and allocates it to products and services using the *Calculate additional Activity Drivers* function as receiver data.

Because it uses the result of another allocation as input, it can also be called a step-down or step-ladder allocation.

Therefore, only one rule is maintained here, which carries out direct allocation (keeping all fields and providing results with a maximum level of granularity).

### 3.3.6 Allocate Products and Services to Customers, Channels and Regions

This Allocation function uses the *Allocate Activities to Products and Services* function as sender data and allocates it to *Channel, Customer and Profit Center Positions* as receiver data. Additional KPI such as *Net profit margin (%)* is calculated here for giving the ratio of net profits to total revenues.

## 3.4 Reporting

In this section, you define additional query functions to enable execution users to review results.

Once the profitability and cost management calculation has been run, the following review and reporting activities can be run:

- *Net Profit Margin per Products and Scenario (%)*, which shows Net Profit Margin for every Products and Services with predefined layout.
- *Review Products by Regions*, which shows results by Products and Regions with predefined layout.
- *Quarterly Net Profit Margin per Product Groups (%)*, which shows Net Profit Margin for every Product and Service group with predefined layout.
- *Review Product Profitability by Sale Channels*, which shows Product and Service results categorized by Sale Channels.
- *Return on Investment per Products and Scenario (%)*, which shows Return on Investment in percentages for every Product and Service with a predefined layout.
- *Review Profit Center Utilization*, which gives read-only access to the profit and loss results on Profit Center.

- *Review Results*, which gives read-only access to the profit and loss results on General Ledger Account level.
- *Review Results (Side by side simulation)*, which provides read data access to the profit and loss results with a predefined layout for simulation.
- *Activity Results*, which focuses on the results at activity level.
- *Review Quarterly Business Unit Results*, which focuses on profit and loss on Business Unit level.
- *Products and Service Results*, which focuses on the results on Product and Service level.
- *Value Flow*, which gives read-only access to the granular results with a predefined layout to trace results from resources through all applied drivers and portions to the final allocated amount on one screen.
- *Review Production by Profit Center*, which gives read-only access to profit and loss results on Profit Center level.
- *Review Channel Profitability by Regions*, which gives read-only access to profit and loss results on Channel and Region level.

#### Note

Specific chart types have not been defined in this sample content. Reports, therefore, use the default "Column" chart type. However, end users can change this type on the fly and save their chart type as the default layout.

### 3.4.1 Net Profit Margin per Products and Scenario (%)

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Product and Service Level. Data is shown on Product and Service Level and categorized by Posting Dates, where for every Product and Service Net Profit Margin (in percentages) is calculated using formula and shown in report.

*Show Result Rows* is set to "Never" for every field in the report, as well.

The following fields are preconfigured in the report:

- *Scenario*
- *Revenue*
- *Profit and Loss*
- *Profit and Loss (%)*
- *Service*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*

- *GL Account*
- *Finance Source*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Profit Center*
- *Geographic Region*
- *Business Unit*
- *Channel*
- *Quantity Unit*
- *Customer ID*

### 3.4.2 Review Products by Regions

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Product and Service Level. Data is shown on Product and Service Level grouped by Regions.

*Show Result Rows* is set to "Never" for every field in the report.

The following fields are preconfigured in the report:

- *Geographic Region*
- *Amount (TC)*
- *Product & Service*, hierarchy **SDA\_PS** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Finance Source*
- *Scenario*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Customer ID*

- *Profit Center*
- *Business Unit*
- *Channel*
- *Quantity Unit*

### 3.4.3 Quarterly Net Profit Margin per Product Groups (%)

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Product and Service Level. Data is shown on Product and Service Level grouped by Product and Service types and categorized by Posting Dates, where for every Product and Service *Net Profit Margin* (in percentages) is calculated using formula and shown in report.

*Show Result Rows* is set to 'Never' for every field in the report.

The following fields are preconfigured in the report:

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Revenue*
- *Profit and Loss*
- *Net Profit Margin (%)*
- *Product & Service*, hierarchy **SDA\_PS** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Version*
- *Activity Source*
- *Activity*
- *Activity Driver*
- *Finance Source*
- *Company*
- *Functional Area*
- *Profit Center*
- *Cost Center*
- *GL Account*
- *Scenario*
- *Geographic Region*
- *Resource Source*
- *Resource*
- *Resource Driver*
- *Business Unit*
- *Channel*
- *Quantity Unit*
- *Currency*
- *Customer ID*

### 3.4.4 Review Product Profitability by Sale Channels

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Profit Center Level. Data is shown on Product Level categorized by Channels, where for every Product *Amount (TC)* and shown in report.

The following fields are preconfigured in the report:

- *Channel*
- *Amount (TC)*
- *Product & Service*, hierarchy **SDA\_PS** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Finance Source*
- *Scenario*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Customer ID*
- *Profit Center*
- *Business Unit*
- *Quantity Unit*
- *Geographic Region*

### 3.4.5 Return on Investment per Products and Scenario (%)

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Product and Service Level. Data is shown on Product and Service Level categorized by Posting Dates, where for every Product and Service Return on Investment - *ROI* (in percentages) is calculated using formula and shown in report.

*Show Result Rows* is set to 'Never' for every field in the report.

The following fields are preconfigured in the report:

- *Scenario*

- *Costs OPEX*
- *Costs of Revenue*
- *Absolute Costs*
- *Profit/Loss*
- *ROI (%)*
- *Service*, hierarchy **SDA\_PS** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Finance Source*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Customer ID*
- *Profit Center*
- *Geographic Region*
- *Business Unit*
- *Channel*
- *Quantity Unit*

### 3.4.6 Review Profit Center Utilization

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Profit Center Level. Data is shown on Profit Center Level categorized by Posting Dates, where for every Profit Center *Amount (TC)* and shown in report.

*Show Result Rows* is set to 'Never' for every field in the report.

The following fields are preconfigured in the report:

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Amount (TC)*
- *Profit Center*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Finance Source*
- *Scenario*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Customer ID*
- *Business Unit*
- *Quantity Unit*
- *Geographic Region*
- *Product & Service*
- *Channel*

### 3.4.7 Review Results

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on level of GL Account. Data is shown on General Ledger Account Level categorized by Posting Dates, where for every GL Account *Amount (TC)*.

*Show Result Rows* is set to 'Never for every field in the report.

The following fields are preconfigured in the report:

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Amount (TC)*
- *Net profit margin (%)*
- *GL Account*, hierarchy **SDA\_PL** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *Finance Source*
- *Version*
- *Resource*
- *Resource Driver*

- *Resource Source*
- *Currency*
- *Customer ID*
- *Profit Center*
- *Geographic Region*
- *Scenario*
- *Service*
- *Business Unit*
- *Channel*
- *Quantity Unit*

### 3.4.8 Review Results (Side by side simulation)

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on level of GL Account. Data is shown on General Ledger Account Level categorized by Posting Dates, where for every GL Account *Amount (TC)*.

*Show Result Rows* is set to 'Never for every field in the report.

The following fields are preconfigured in the report:

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Amount (TC)*
- *Net profit margin (%)*
- *GL Account*, hierarchy **SDA\_PL** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *Finance Source*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Customer ID*
- *Profit Center*
- *Geographic Region*
- *Scenario*
- *Service*
- *Business Unit*
- *Channel*
- *Quantity Unit*

### 3.4.9 Activity Results

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Activity level. Data is shown on Activity Level categorized by Posting Dates, where for every Activity *Amount (TC)* shown in report.

*Show Result Rows* is set to 'Never' for every field in the report.

The following fields are preconfigured in the report:

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Amount (TC)*
- *Activity*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Profit Center*
- *Finance Source*
- *Geographic Region*
- *Scenario*
- *Version*
- *Service*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Customer ID*
- *Business Unit*
- *Channel*
- *Quantity Unit*
- *Resource*

Layout is predefined on this query, where data is shown using *Stacked Column* as Chart Type.

### 3.4.10 Review Quarterly Business Unit Results

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Business Unit level. Data is shown on Business Level categorized by Posting Dates, where for every Business Unit *Amount (TC)* shown in report.

*Show Result Rows* is set to 'Never' for every field in the report.

The following fields are preconfigured in the report:

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Amount (TC)*
- *Business Unit*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Profit Center*
- *Finance Source*
- *Geographic Region*
- *Scenario*
- *Version*
- *Service*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Customer ID*
- *Channel*
- *Quantity Unit*
- *Resource*
- *Activity*

### 3.4.11 Products and Service Results

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Business Unit level. Data is shown on Business Level categorized by Posting Dates, where for every Business Unit *Amount (TC)* shown in report.

*Show Result Rows* is set to 'Never' for every field in the report.

The following fields are preconfigured in the report:

- *Product & Service*
- *Amount (TC)*
- *GL Account*, hierarchy **SDA\_PL** is applied on this Characteristic field.

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*

- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *Finance Source*
- *Geographic Region*
- *Scenario*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Customer ID*
- *Profit Center*
- *Channel*
- *Product & Service*
- *Quantity Unit*

### 3.4.12 Value Flow

This Query function is used to provide a graphical representation of the final results of Automotive Profitability and Cost Management at resource, activity and product and service level. *Amount (TC)* is shown at resource, activity and product and service level.

Display option *Show Result Rows* is set to "Never" for every field in the report.

The following fields are preconfigured in the report:

- *Amount (TC)*
- *Resource*
- *Activity*
- *Service*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *GL Account*
- *Profit Center*
- *Finance Source*
- *Geographic Region*
- *Scenario*
- *Version*
- *Resource Driver*

- *Resource Source*
- *Currency*
- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Customer ID*
- *Business Unit*
- *Channel*
- *Quantity Unit*

No selections are applied on any of the fields configured in the query. Predefined layout is set to *Data Grid*, but the purpose of query is showing data using *Sankey Diagram* in Value flow.

### 3.4.13 Review Production by Profit Center

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Product and Service level. Data is shown on Product and Service Level categorized by Profit Centers, where for every Product and Service *Amount (TC)* shown in report.

Display option *Show Result Rows* is set to "Never" for every field in the report.

The following fields are preconfigured in the report:

- *Amount (TC)*
- *Profit Center*
- *Product & Service*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *Finance Source*
- *Geographic Region*
- *Scenario*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Customer ID*
- *GL Account*
- *Business Unit*
- *Channel*
- *Quantity Unit*

- *Posting Date*, optionally the user can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.

No selections are applied on any of the fields configured in the query. Predefined layout is set to *Chart*, but the purpose of query is showing data using *Force Diagram* in Value flow.

### 3.4.14 Review Channel Profitability by Regions

This Query function is used to provide read data access to the final results of Automotive Profitability and Cost Management Results on Product and Service level. Data is shown on Product and Service Level categorized by Profit Centers, where for every Product and Service *Amount (TC)* shown in report.

Display option *Show Result Rows* is set to "Never" for every field in the report.

The following fields are preconfigured in the report:

- *Amount (TC)*
- *Channel*
- *Geographic Region*

Some dimensions are available as free characteristics which can be added anytime to help with analysis, such as:

- *Activity*
- *Activity Driver*
- *Activity Source*
- *Cost Center*
- *Company*
- *Functional Area*
- *Finance Source*
- *Scenario*
- *Version*
- *Resource*
- *Resource Driver*
- *Resource Source*
- *Currency*
- *Customer ID*
- *GL Account*
- *Business Unit*
- *Quantity Unit*
- *Posting Date*: You can choose a hierarchy to show the date in a hierarchy of years, quarters, months, and days.
- *Product & Service*
- *Profit Center*



No selections are applied on any of the fields configured in the query. Predefined layout is set to *Chart*, where *3D Column* is used as chart type.

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