6. SmartData

6.1 SmartData

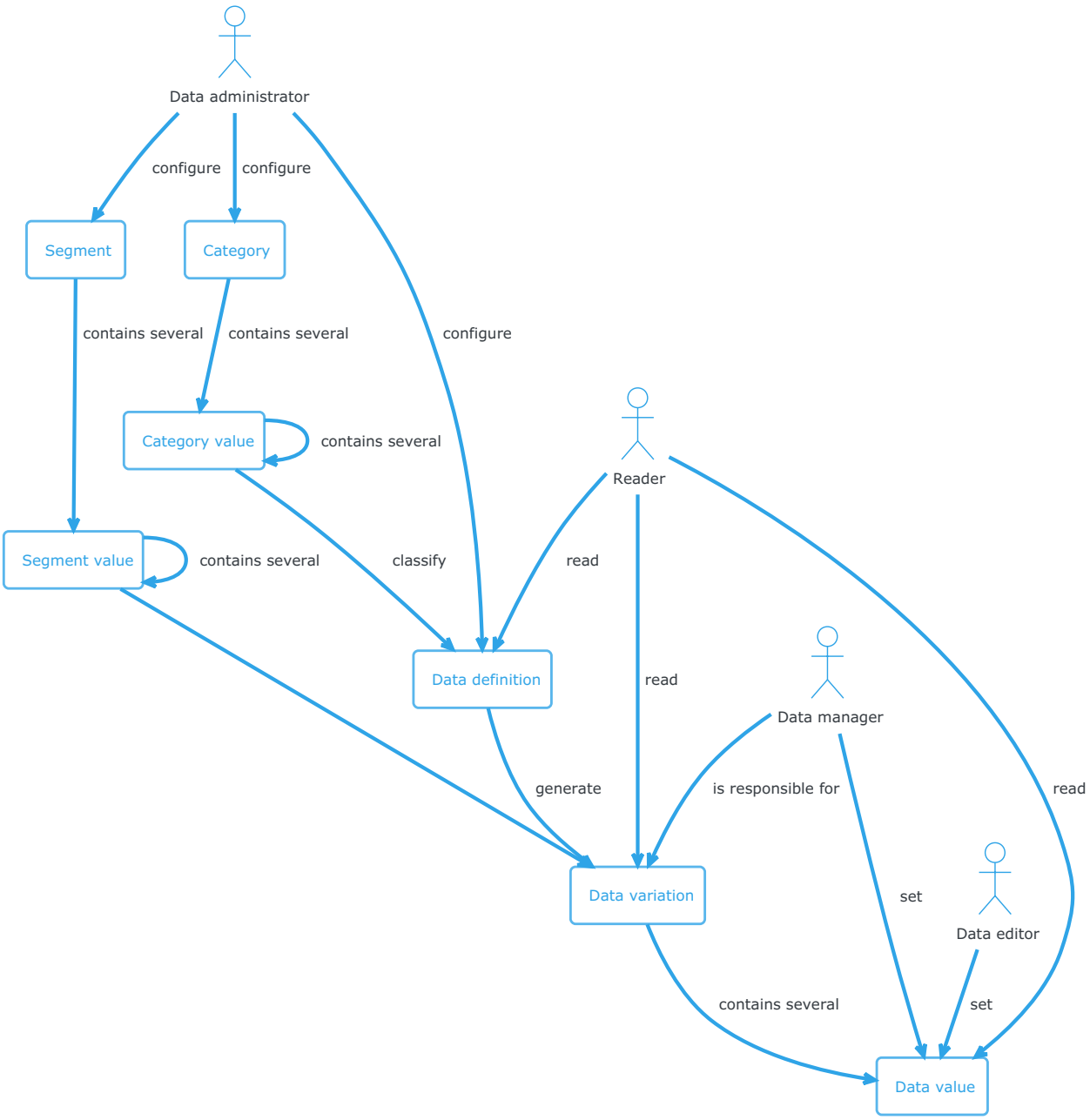
6.1.1 What is SmartData?

SmartData allows you to aggregate non-transactional data and share then across the Company.

It includes essential features such as:

- categorization
- segmentation
- gouvernance
- search

6.1.2 How it's organized?



Categories classify data.

Segments divide a larger whole into smaller, distinct parts based on certain criteria or characteristics.

Data definitions define a data.

Data variation varies a data item across a set of segment values.

Data value varies a data item across time.

A **data administrator** configure the categories, segments, data definitions and the data variations. He also defines who is responsible for each data variation.

A **data manager** is responsible for a data variation. He can modify the data values and guarantees their validity.

A **data editor** can modify the data values under the responsibility of the data manager.

A **data reader** can consult the master data.

Dernière mise à jour: August 10, 2023

Créé: August 7, 2023

6.2 Data categories

SmartData

6.2.1 Data categories

Categories classify data.

You can create several categories and each of them can have several values organized in a tree.

What can I do on categories?

List categories

Go to Administration / Categories.

Create or modify a category

Open the form to configure a category.

Add or modify a category value

Delete a category

in a future version

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.2.2 Configure a category

Category

Name

required

Name of the category for humans.

Example

Modeling, Tools

Code

required

unique

not changeable

Unique code of the category.

This code can be used to reference the category in the API.

Example

modeling, tools

Note

The application proposes a code based on the name. The proposal can be modified or left as is.

Remember, the code must be unique. If the proposal made by the application is already in use, it will have to be modified manually by the user.

Position

required

Position of the category in the list of categories.

In order to display categories always in the same order in all the master data, the categories are sorted by position.

Category values

List of valid values.

Name

required

Name of the category value for humans.

Example

Technical caracteristics of the vehicle, Cost

Code

required

unique

not changeable

Unique code of the category value.

This code can be used to reference the category value in the API.

Example

technical_caracteristics, cost

Note

The application proposes a code based on the name. The proposal can be modified or left as is.

Remember, the code must be unique. If the proposal made by the application is already in use, it will have to be modified manually by the user.

Children

Limitation

For now, it impossible to move a category value in the tree.

Children category values of the category value to build a tree of values.

Example

- Technical caracteristics of the vehicle
- Weight of the vehicle parts
- Weight of frame
- Vehicle's unloaded weight
- Kilometric consumption
- Estimated kilometric consumption
- Real kilometric consumption
- Energy production
- Emission factor

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.2.3 Delete a category

* required

Remove the category from the master data and the existing links with datas.

If the category has children, they are deleted too.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.3 Data segments

SmartData

6.3.1 Data segments

Segments divide a larger whole into smaller, distinct parts based on certain criteria or characteristics.

You can create several segments and each of them can have several values organized in a tree.

What can I do on Segments?

List Segments

Go to Administration / Segments.

Create or modify a segment

Open the form to configure a segment.

Add or modify a segment value

Delete a segment

in a future version

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.3.2 Configure a segment

Segment

Name

required

Name of the segment for humans.

Example

Geographical area, Energy type

Code

required

unique

not changeable

Unique code of the segment.

This code can be used to reference the segment in the API.

Example

geographical_area, energy_type

Note

The application proposes a code based on the name. The proposal can be modified or left as is.

Remember, the code must be unique. If the proposal made by the application is already in use, it will have to be modified manually by the user.

Position

required

Position of the segment in the list of segments.

In order to display segments always in the same order in all the master data, the segments are sorted by position.

Segment values

List of valid values.

In order to display segment values always in the same order in all the master data, the segments values are sorted by tree level and name.

Name

required

Name of the segment value for humans.

Example

France, Germany, England

Gasoline, Diesel, Electric

Code

required

unique

not changeable

Unique code of the segment value.

This code can be used to reference the segment value in the API.

Example

fr, de, en

gasoline, diesel, electric

Note

The application proposes a code based on the name. The proposal can be modified or left as is.

Remember, the code must be unique. If the proposal made by the application is already in use, it will have to be modified manually by the user.

Children

Limitation

For now, it impossible to move a segment value in the tree.

Children segment values of the segment value to build a tree of values.

Example

- World
- America
- Canada
- USA
- Mexico
- Europe
- England
- France
- Germany

Important

The segment value tree is important because it has a considerable impact on the way data is extracted from the master data.

If a value exits for the requested segment value, it will be used.

If the value doesn't exist, the system will look for the value of the parent segment value, and so on until it finds a value or arrives to the root value of the tree.

On the example above, if the user wants a data value for `France` and it doesn't exist, the system will look for the data for `Europe` and if it doesn't exist, the system will look for the data for `World`.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.3.3 Delete segment

in a future version

A segment can't be removed if it has children or if it's used to define a data value.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.4 Data definitions and variations

6.4.1 Configure a data definition

Name

required

Name of the data for humans.

Example

Battery capacity, Fuel cell manufacturing emissions

Code

required

unique

not changeable

Unique code of the data.

This code can be used to reference the data definition in the API.

Example

battery_capacity, fuel_cell_manufacturing_emissions

Categories

One value per category.

Description

Small text visible by everyone to describe the data.

Update frequency

requis

Choice among:

- Yearly

SmartData track when data values are updated.

This parameter will define the update frequency so that we can alert the data administrator and/or manager that certain data is out of date.

Default data manager

requis

Choice among the users of the application.

The actuel data manager of a data value is defined in the data variation. Here, you can define the default data manager to use when you create new variations.

Default type

requis

Choice among:

- Primary
- Secondary

Definition

Primary data values are directly defined numerical values.

Secondary data values are calculated from other data values (primary or secondary) using a formula.

The actuel type of a data value is defined in the data variation. Here, you can define the default type to use when you create new variations.

Default measurement unit

required

Choice among the measurement units of the application.

The actual measurement unit of a data value is defined in the data variation. Here, you can define de default measurement unit to use when you create new variations.

Data visible by everyone

required

Yes or no.

If yes, the data will be visible by all users of the application.

If no, the data will be visible only by the data responsible and its editors.

By default, the values can be overloaded

required

Yes or no.

Definition

Overloading a data value means that the value is replaced by a custom value for the calculation.

Active segments

non modifiable

Select the segments for which be active for the data.

You will be able to create data variation only for the values of the segments selected here.

Four Gharib

Est ce qu'une donnée peut ne pas avoir de segment ?

Limitation

For this version of SmartData, you won't be able to add a segment on an existing data definition.

This fixture will be available in a future version.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.4.2 Configure a data variation

Type

requis

non modifiable

Choice among:

- Primary
- Secondary

Definition

Primary data values are directly defined numerical values.

Secondary data values are calculated from other data values (primary or secondary) using a formula.

By default, the default type of the data definition is selected.

Measurement unit

required

non modifiable

Choice among the measurement units of the application.

By default, the default measurement unit of the data definition is selected.

Values can be overloaded

requis

Yes or no.

By default, the default configuration of the data definition is selected.

Data manager

required

Choice among the users of the application.

This person is in charge of the data values of the variation.

It displays the name, first name, email address and entity of the user.

Sébastien Collins
sebastien.collins@totalenergies.com
MS/NMM/B2B/DIG/TMDS

Data editors

Choices among the users of the application.

These persons can change the values of the variation under the supervision of the data manager.

It displays the name, first name, email address and entity of the user.

Rhian Odoms
rhian.odoms@external.totalenergies.com
MS/NMM/B2B/DIG/TMDS

Dernière mise à jour: August 10, 2023
Créé: August 10, 2023

6.4.3 How to create a data from scratch?

Create the data definition

Name *	Consumption per 100km
Code *	consumption_per_100km
Categories	Modeling: Technical characteristics of a vehicle Tools: TCO
Description	Consumption of the vehicle per 100km
Update frequency *	Yearly
Default data manager *	Sébastien Collins - MS/NMM/B2B/DIG/TMDS
Default type *	Secondary
Default measurement unit *	L/100km
Data visible to everyone *	◉ Yes ○ No
By default, this data can be overloaded when used *	◉ Yes ○ No
Active segments	☐ Cost type ☐ Energy type (cost) ☑ Energy type (energetic yield) ☑ Vehicle type ☑ Geographical zone
The list of active segments cannot be further edited	

Save

Create the data variations

1. The application detects that there is no variation for the data definition and displays the tab **New variations**.
2. Select all the segments values you want to combine to create the new variations.
3. The application will display all non-existing variations in a table with the default configuration defined in the data definition.
4. Change the configuration of the variations if needed.
5. Click on **Create** to create the variations.

Once the variations are created, it will disappear from the tab **New variations** and will be displayed in the tab **Existing variations**.

Name	Consumption per 100km
Code	consumption_per_100km
Category	Modeling: Technical characteristics of a vehicle Tools: TCO
Description	Consumption of the vehicle per 100km
Update frequency	Yearly
Default data manager	**Sébastien Collins** sebastien.collins@totalenergies.com MS/NMM/B2B/DIG/TMDS
Default type	Secondary
Default unit	L/100km
Data visible to everyone	Yes
By default, this data can be overloaded when used	Yes
Active segments	Energy type (energetic yield), Vehicle type, Geographical zone

Edit

Exiting variations | **New variations**

Display all non exiting combinations of these segments values

Energy type (energetic yield)	Vehicle type	Geographical zone
☑ Gasoline	☑ Autobus	☑ Worldwide
☑ Gasoline/Gasoline E85	☑ PL	☑ Worldwide/Europe
☑ CNG	☑ PL/Truck	☑ Worldwide/Europe/Benelux
☐ CNG/MHEV	☐ VUL	☐ Worldwide/Europe/France
☐ FCEV	☐ VUL/LCV	☐ Worldwide/Europe/Germany
☐ FCEV/SMR		☐ Worldwide/Europe/Spain
☐ FCEV/electrolysis		☐ Specific
☐ FCEV/electrolysis renew		
☐ BEV		

Bulk actions

For all selected data

- ○ Perform action: Update
- ○ Change data manage
- ○ Add data editor
- ○ Remove data editor
- ○ Change pilotable

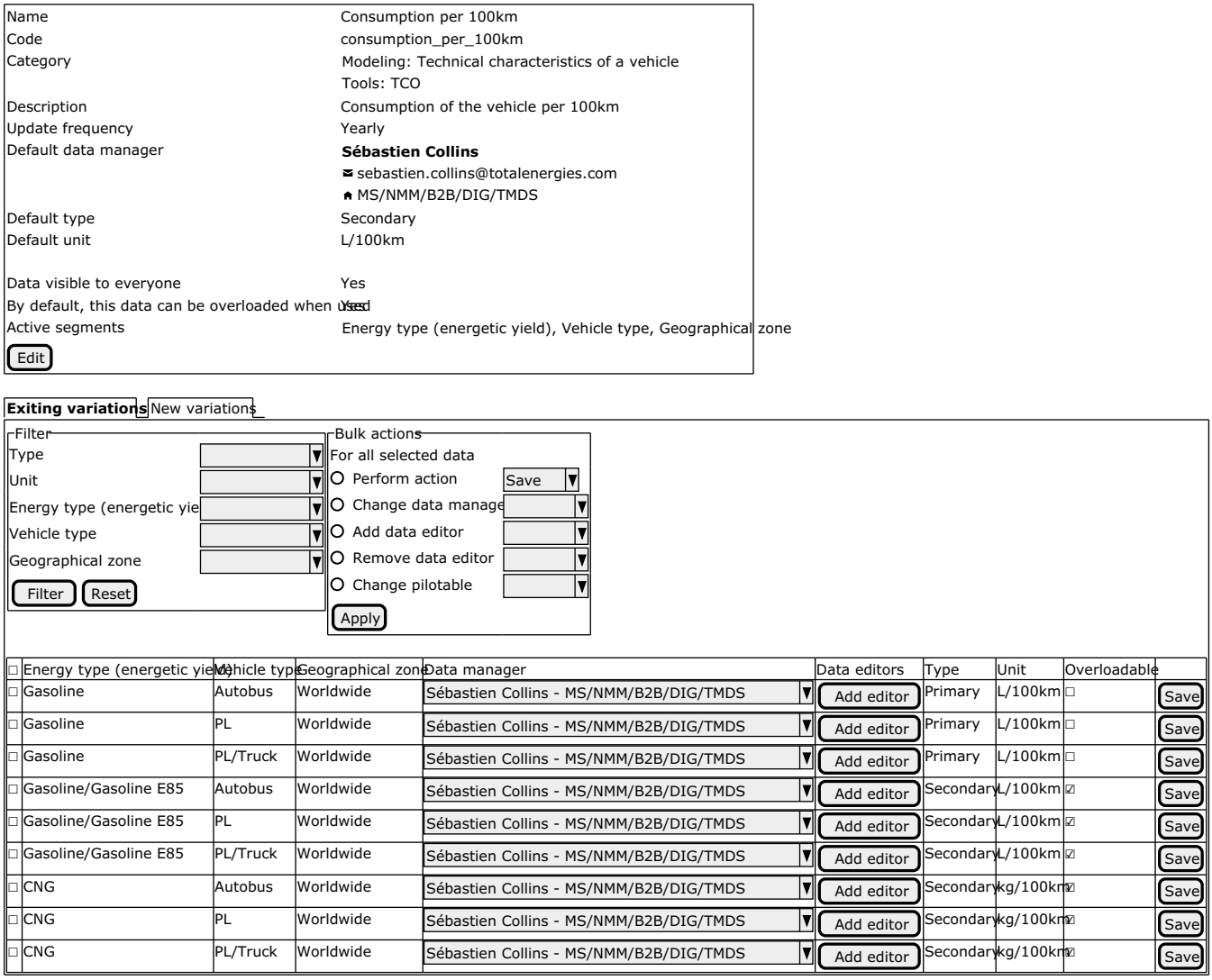
Apply

☐	Energy type (energetic yield)	Vehicle type	Geographical zone	Data manager	Data editors	Type	Unit	Overloadable	
☑	Gasoline	Autobus	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Primary	L/100km	☐	Create
☐	Gasoline	Autobus	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline	Autobus	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	Gasoline	PL	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Primary	L/100km	☐	Create
☐	Gasoline	PL	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline	PL	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	Gasoline	PL/Truck	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Primary	L/100km	☐	Create
☐	Gasoline	PL/Truck	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline	PL/Truck	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	Gasoline/Gasoline E85	Autobus	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline/Gasoline E85	Autobus	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline/Gasoline E85	Autobus	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	Gasoline/Gasoline E85	PL	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline/Gasoline E85	PL	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline/Gasoline E85	PL	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	Gasoline/Gasoline E85	PL/Truck	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline/Gasoline E85	PL/Truck	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	Gasoline/Gasoline E85	PL/Truck	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	CNG	Autobus	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	kg/100km	☑	Create
☐	CNG	Autobus	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	CNG	Autobus	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	CNG	PL	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	kg/100km	☑	Create
☐	CNG	PL	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	CNG	PL	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☑	CNG	PL/Truck	Worldwide	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	kg/100km	☑	Create
☐	CNG	PL/Truck	Worldwide/Europe	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create
☐	CNG	PL/Truck	Worldwide/Europe/Benelu	Sébastien Collins - MS/NMM/B2B/DIG/TMDS	Add editor	Secondary	L/100km	☑	Create

> **Warning**
>
> A data definition can have no segment.
>
> In this case, you will still have to create a variation, and you can only create one for this data.

Modify data variations

1. Go into the tab **Existing variations**. The variations will be displayed in a table.
2. Change the configuration you want.
3. Click on **Save** to save the modifications.



Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

SmartData

6.4.4 Data definitions and variations

Data definitions define a data.

Data variation varies a data item across a set of segment values.

What can I do on data definitions?

List data definitions

Go to Administration / Data definitions.

Create or modify a data definition

Open the form to configure a data definition.

Add or modify a data variation

Open the form to configure a data variation.

Archive a data definition

in a future version

Delete a data definition

in a future version

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.4.5 Archive a data definition or a variation

in a future version

If a data definition or a variation is archived, if related data values will still be accessible but marked as archived.

The archived definitions, variations or values are not editable.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.4.6 Delete a data definition or a variation

in a future version

If a data definition or a variation is deleted, if related data values will also be deleted.

The deleted definitions, variations or values are removed definitively from the database.

This action can't be undone.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.5 Setting data values

6.5.1 Setting primary data values

Source

* required

Field text where the data manager can explain where the values come from.

Values

The values are decimals and defined across time.

The period to display is set in the system configuration.

The data are presented as a matrix with each period in columns and the activated segment in a row.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.5.2 Setting secondary data values

Source

required

Field text where the data manager can explain where the values come from.

Formula

required

The formula handle mathematical operators `+`, `-`, `*`, `/`, `(`, `)`.

The priority between mathematical operators is taken into account, without parentheses being explicitly written by the user.

Validation of the formula

The formula must be mathematically valid.

The formula of a data cannot refer to itself.

Example

To compute the data `x`, the user fill the formula `x + a`.

If the formula generates circular references, it must be considered as invalid. The current data must be taken into account in the detection of circular references.

Example

To compute the data `x`, the user fill the formula `a + b`.

If the formula of calul of `a` already exists and is `x + d`, then the formula of `x` is invalid because `x` would be equal to `(x + d) + b`.

This validation is recursive, the reference to the data to be calculated can be found in the formula of a sub-calculation.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.5.3 How to set values with mixed data types?

All the variations the data manager, or the editor, will be display sorted by segment value.

Pour dev front

La page rique d'être très lonque s'il y a beacoups de variations de données secondaire, prévoir une optimisation.

Name	Consumption per 100km
Code	consumption_per_100km
Category	Modeling: Technical characteristics of a vehicle Tools: TCO
Description	Consumption of the vehicle per 100km
Update frequency	Yearly
Last update	2021-06-01
Data manager	**Sébastien Collins** sebastien.collins@totalenergies.com MS/NMM/B2B/DIG/TMDS
Data visible to everyone	Yes

Filter

Type

Energy type (energetic yie

Vehicle type

Geographical zone

Filter Reset

Gasoline / Autobus / Worldwide

Source: Interne source

Values in **L/100km**

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
10.60	10.58	10.56	10.54	10.52	10.50	10.48	10.46	10.44	10.42	10.40	10.38	10.36	10.34	10.32	10.30	10.28	10.26	10.24	10.22	10.20

Save

Gasoline / PL / Worldwide

Source: Interne source

Values in **L/100km**

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
10.60	10.58	10.56	10.54	10.52	10.50	10.48	10.46	10.44	10.42	10.40	10.38	10.36	10.34	10.32	10.30	10.28	10.26	10.24	10.22	10.20

Save

Gasoline / PL/Truck / Worldwide

Source: Interne source

Values in **L/100km**

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
10.60	10.58	10.56	10.54	10.52	10.50	10.48	10.46	10.44	10.42	10.40	10.38	10.36	10.34	10.32	10.30	10.28	10.26	10.24	10.22	10.20

Save

Gasoline/Gasoline E85 / Autobus / Worldwide

Source: Interne source

Formulas

Year	Formula	Result
2020	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2020** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2020** *100 /**Gasoline/Gasoline E85 2020**	10
2021	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2021** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2021** *100 /**Gasoline/Gasoline E85 2021**	11
2022	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2022** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2022** *100 /**Gasoline/Gasoline E85 2022**	12
2023	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2023** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2023** *100 /**Gasoline/Gasoline E85 2023**	13
2024	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2024** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2024** *100 /**Gasoline/Gasoline E85 2024**	14
2025	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2025** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2025** *100 /**Gasoline/Gasoline E85 2025**	15
2026	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2026** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2026** *100 /**Gasoline/Gasoline E85 2026**	16
2027	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2027** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2027** *100 /**Gasoline/Gasoline E85 2027**	17
2028	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2028** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2028** *100 /**Gasoline/Gasoline E85 2028**	18
2029	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2029** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2029** *100 /**Gasoline/Gasoline E85 2029**	19
2030	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2030** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2030** *100 /**Gasoline/Gasoline E85 2030**	20
2031	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2031** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2031** *100 /**Gasoline/Gasoline E85 2031**	21
2032	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2032** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2032** *100 /**Gasoline/Gasoline E85 2032**	22
2033	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2033** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2033** *100 /**Gasoline/Gasoline E85 2033**	23
2034	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2034** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2034** *100 /**Gasoline/Gasoline E85 2034**	24
2035	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2035** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2035** *100 /**Gasoline/Gasoline E85 2035**	25
2036	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2036** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2036** *100 /**Gasoline/Gasoline E85 2036**	26
2037	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2037** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2037** *100 /**Gasoline/Gasoline E85 2037**	27
2038	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2038** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2038** *100 /**Gasoline/Gasoline E85 2038**	28
2039	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2039** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2039** *100 /**Gasoline/Gasoline E85 2039**	29
2040	1000 /**Useful Energy needed for 100km Autobus Gasoline/Gasoline E85 2040** *1 /**Energetic yield Autobus Gasoline/Gasoline E85 2040** *100 /**Gasoline/Gasoline E85 2040**	30

Save

Gasoline/Gasoline E85 / PL / Worldwide

Source: Interne source

Formulas

Year	Formula	Result
2020	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2020** *1 /**Energetic yield PL Gasoline/Gasoline E85 2020** *100 /**Gasoline/Gasoline E85 2020**	10
2021	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2021** *1 /**Energetic yield PL Gasoline/Gasoline E85 2021** *100 /**Gasoline/Gasoline E85 2021**	11
2022	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2022** *1 /**Energetic yield PL Gasoline/Gasoline E85 2022** *100 /**Gasoline/Gasoline E85 2022**	12
2023	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2023** *1 /**Energetic yield PL Gasoline/Gasoline E85 2023** *100 /**Gasoline/Gasoline E85 2023**	13
2024	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2024** *1 /**Energetic yield PL Gasoline/Gasoline E85 2024** *100 /**Gasoline/Gasoline E85 2024**	14
2025	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2025** *1 /**Energetic yield PL Gasoline/Gasoline E85 2025** *100 /**Gasoline/Gasoline E85 2025**	15
2026	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2026** *1 /**Energetic yield PL Gasoline/Gasoline E85 2026** *100 /**Gasoline/Gasoline E85 2026**	16
2027	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2027** *1 /**Energetic yield PL Gasoline/Gasoline E85 2027** *100 /**Gasoline/Gasoline E85 2027**	17
2028	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2028** *1 /**Energetic yield PL Gasoline/Gasoline E85 2028** *100 /**Gasoline/Gasoline E85 2028**	18
2029	1000 /**Useful Energy needed for 100km PL Gasoline/Gasoline E85 2029** *1 /**Energetic yield PL Gasoline/Gasoline E85 2029** *100 /**Gasoline/Gasoline E85 2029**	19

Primary data values are displayed in a table with one column per time period.

Secondary data values are displayed in a table with one row per time period, and one column for the formula and the last column to display the result of the calculation of the formula based on the current data of the master data.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

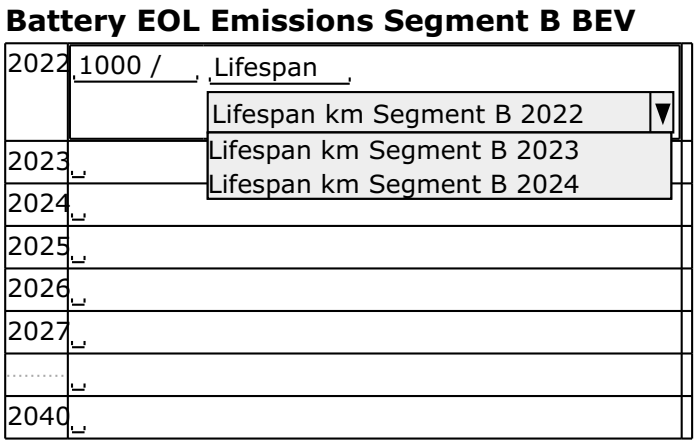
6.5.4 How to write formula?

When a data is configured, a name and a code if generated for each data value by concatenating the names and codes of the data definition, and each segments value composing the variation, and adding the time period.

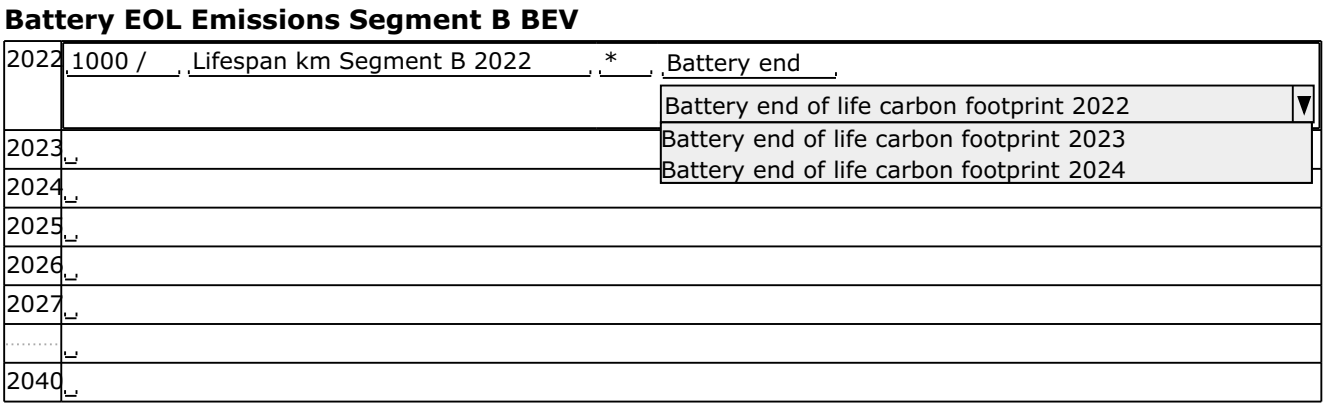
Example

Battery EOL Emissions	BEV	Autobus	2022	
battery_eol_emissions	bev	autobus	2022	
Battery EOL Emissions	BEV	Autobus	2023	
battery_eol_emissions	bev	autobus	2023	
Energy Production Emissions	VL/Segment D	FCEV electrolysis	France	2030
energy_production_emissions	vl_segment_d	fcev_electrolysis	france	2030

In the formula field, start typing the formula. When you start to type some characters that match with the beginning of a data value name, a list of suggestions is displayed. Select the data value you want to use in the formula.



Then, continue to type the rest or your formula. When new characters match with the beginning of a data value name, the list of suggestions will be displayed.



Once the formula is written, the application will compute the result with the data in the master data and display the result in the last column. If something went wrong, an error message will be displayed.

When you start to type the formula of the next year, the application will automatically make a suggestion based on the previous year: You can fix the suggested formula or write a new one.

Battery EOL Emissions Segment B BEV

Year	Formula	Result
2022	1000 / Lifespan km Segment B 2022 * Battery end of life carbon footprint 2022 * Battery Capacity Segment B BEV 2022	201
2023	Suggestion 1000 / Lifespan km Segment B 2023 * Battery end of life carbon footprint 2023 * Battery Capacity Segment B BEV 2023 Apply Ignore	
2024		
2025		
2026		
2027		
.....		
2040		

If you fix the suggested formula, the application take it into account for the next suggestion:

Battery EOL Emissions Segment B BEV

Year	Formula	Result
2022	1000 / Lifespan km Segment B 2022 * Battery end of life carbon footprint 2022 * Battery Capacity Segment B BEV 2022	201
2023	1000 / Lifespan km Segment B 2022 * Battery end of life carbon footprint 2023 * Battery Capacity Segment B BEV 2023	210
2024	Suggestion 1000 / Lifespan km Segment B 2022 * Battery end of life carbon footprint 2024 * Battery Capacity Segment B BEV 2024 Apply Ignore	
2025		
2026		
2027		
.....		
2040		

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

TODO **SmartData**

6.5.5 Setting data values

The data manager browse the master data to access the data he is responsible for.

When he consults a data, a button **Edit** is displayed to access to the edition form of data values.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.6 Browsing the master data

TODO **SmartData**

6.6.1 Browsing the master data

Anyone with access to the application can browse the master data.

Data with the flag Data visible by everyone to `Yes` are visible by everyone. Otherwise, the data is only visible to data administrators, its data manager and their editors.

On the first page, the user has the list of the data definitions he can access. He can filter them by name, category, segment or manager.

When he consults a data, he can see a table with all the values by variations.

Name	Consumption per 100km
Code	consumption_per_100km
Category	Modeling: Technical characteristics of a vehicle Tools: TCO
Description	Consumption of the vehicle per 100km
Update frequency	Yearly
Last update	2020-01-01
Active segments	Energy type (energetic yield), Vehicle type, Geographical zone

Filter

Type

Unit

Energy type (energetic yie

Vehicle type

Geographical zone

Filter Reset

Energy type (energetic yield)	Vehicle type	Geographical zone	Unit	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Gasoline	Autobus	Worldwide	L/100km	3.60	3.58	3.56	3.54	3.52	3.50	3.48	3.46	3.44	3.42	3.40	3.38	3.36	3.34	3.32	3.30	3.28	3.26	3.24	3.22	3.20
Gasoline	PL	Worldwide	L/100km	4.60	4.58	4.56	4.54	4.52	4.50	4.48	4.46	4.44	4.42	4.40	4.38	4.36	4.34	4.32	4.30	4.28	4.26	4.24	4.22	4.20
Gasoline	PL/Truck	Worldwide	L/100km	5.60	5.58	5.56	5.54	5.52	5.50	5.48	5.46	5.44	5.42	5.40	5.38	5.36	5.34	5.32	5.30	5.28	5.26	5.24	5.22	5.20
Gasoline/Gasoline E85	Autobus	Worldwide	L/100km	4.60	4.58	4.56	4.54	4.52	4.50	4.48	4.46	4.44	4.42	4.40	4.38	4.36	4.34	4.32	4.30	4.28	4.26	4.24	4.22	4.20
Gasoline/Gasoline E85	PL	Worldwide	L/100km	5.60	5.58	5.56	5.54	5.52	5.50	5.48	5.46	5.44	5.42	5.40	5.38	5.36	5.34	5.32	5.30	5.28	5.26	5.24	5.22	5.20
Gasoline/Gasoline E85	PL/Truck	Worldwide	L/100km	6.60	6.58	6.56	6.54	6.52	6.50	6.48	6.46	6.44	6.42	6.40	6.38	6.36	6.34	6.32	6.30	6.28	6.26	6.24	6.22	6.20
CNG	Autobus	Worldwide	kg/100km	5.60	5.58	5.56	5.54	5.52	5.50	5.48	5.46	5.44	5.42	5.40	5.38	5.36	5.34	5.32	5.30	5.28	5.26	5.24	5.22	5.20
CNG	PL	Worldwide	kg/100km	6.60	6.58	6.56	6.54	6.52	6.50	6.48	6.46	6.44	6.42	6.40	6.38	6.36	6.34	6.32	6.30	6.28	6.26	6.24	6.22	6.20
CNG	PL/Truck	Worldwide	kg/100km	7.60	7.58	7.56	7.54	7.52	7.50	7.48	7.46	7.44	7.42	7.40	7.38	7.36	7.34	7.32	7.30	7.28	7.26	7.24	7.22	7.20

Foreach variation, by clicking on a link at the end of the line, he can access for more detail:

- if the values can be overloaded
- the list of the formulas used to calculate each year
- the last update date

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.7 System configuration

SmartData

6.7.1 System configuration

Data periods

Choice among:

- daily

dans une future version

- monthly

dans une future version

- yearly

When a data variation is created, data values will be generated across time base on the period defined here.

Active data period starts at

Data value are generated from this date.

If you modify this date, and set a date that precedes the previous one, the missing values will be generated.

Example

The data period is set to `monthly` and the active data period starts at `2022-01-01`.

If you change it to `2021-01-01`, the data values for the year 2021 will be generated.

If you modify this date, and set a date that follows the previous one, the existing values will be archived. They will still exist and be accessible but marked as archived and won't be editable.

Example

The data period is set to `monthly` and the active data period starts at `2020-01-01`.

If you change it to `2021-01-01`, the data values for the year 2020 will be archived.

Active data period ends at

Data value are generated until this date.

If you modify this date, and set a date that precedes the previous one, the existing values will be archived. They will still exist and be accessible but marked as archived and won't be editable.

Example

The data period is set to `monthly` and the active data period ends at `2050-12-31`.

If you change it to `2045-12-31`, the data values from 2046 to 2050 will be archived.

If you modify this date, and set a date that follows the previous one, the missing values will be generated.

Example

The data period is set to `monthly` and the active data period ends at `2045-12-31`.

If you change it to `2050-12-31`, the data values from 2046 to 2050 will be generated.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.8 Diagnose master data health

6.8.1 Detect orphan data

in a future version

Identify data that are not used in the master data or in the tools.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023

6.8.2 Detect outdated data

in a future version

Identify data that are not been updated according the update frequency define in the data definition.

Dernière mise à jour: August 10, 2023

Créé: August 10, 2023