



Best-ReMaP

Healthy Food for a Healthy Future



WP 5 – REFORMULATION AND PROCESSED FOOD MONITORING

T0 Statistics methodology (task 5.3.2)

Anses

19.05.2022



Mute your microphone

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Use the chat if you have comments or questions

Use the chat if you want to speak

Give your name and your country before speaking



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1) Introduction of task 5.3.2





Task 5.3.2 : Production of statistics for the T0

Involved partners
Bosnia-and-Herzegovina
Croatia
Cyprus
Ireland
Poland

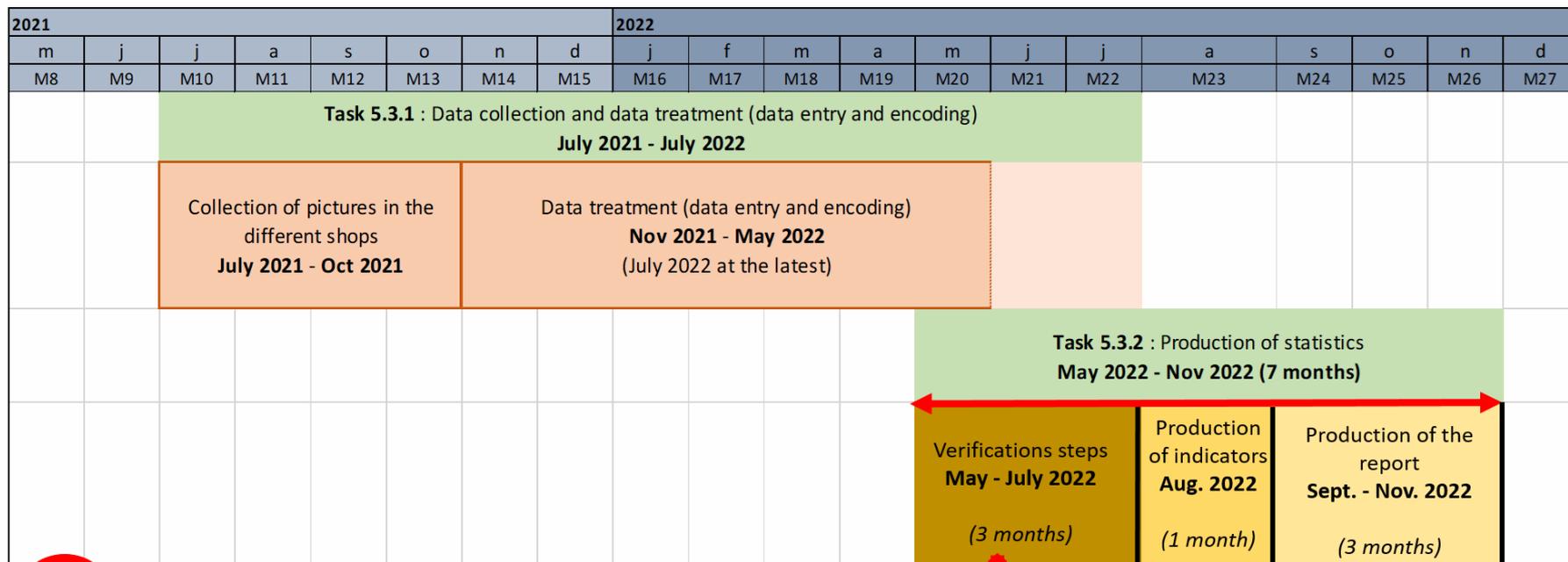
- Partners involved in the first European Snapshot (T0) will have **to produce statistics/indicators** by Best-ReMaP categories and subcategories of product collected during the T0
- Each partners will have **to produce a report** that will be included in the WP5 deliverable (D5.3)
- Some of these statistics will be presented at the final WP5 workshop of restitution with stakeholders (task 5.2.5)





WORK Package 5 – Reformulation and processed food monitoring

Timeline of the task 5.3.2



1st June

**Please send us feedback to confirm that the R and Rstudio software are installed
 If you have any problems before this date, please let us know so that we can help you**

End of verifications and corrections to be made

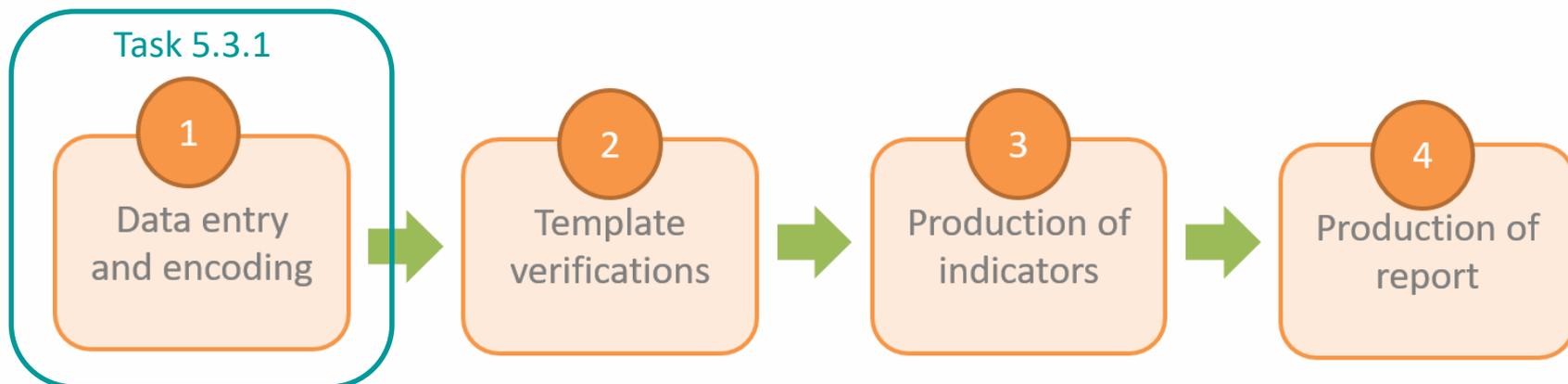
You should have all figures and tables ready and stored in the "indicators" file

Report ready to be sent to wp5

These deadlines are indications so that you can organize yourselves as well as possible



Summary of the steps in task 5.3.2



It is important to finish each step before moving on to the next

- **The data entry and encoding of the collected data must be fully completed before starting the steps of task 5.3.2**
- **Steps 2 and 3** will be done by data processing programs on the Rstudio software which is a free software and therefore accessible to all. The programs have already been created and written in order to harmonise the work and ensure that all partners work in the same way. You will just need to run the programs on your data (you will not have to create any programs).
- **Step 4** will not be detailed in this training but you will receive all the elements later so that everyone can produce a report on the analysis of his collected data





Equipment needed

Tools you
already
have

- **T0 collection template** : template that you filled in according to the WP5 methodology during your T0 data collection and with data for the 5 priority food categories.
- **Pictures of the products** that you have collected for your T0 data collection

Tools you will
have to
download
(explanation
slides ?)

- **R, Rstudio** : Free statistical software that you will use to check and correct the data entered in your template and to perform indicators/statistics on your data

- **WP5 R programs** : R programs created by Anses that you will just have to run on the Rstudio software (you will be guided at each step, you will not have to create programs or develop code).
- **WP5 verification file**: file that you will have to download and save in .csv format as it will be used in the R program. This file does **not have to be filled in or modified**, it is a support document for R programs but it must be available on your computer.

The **WP5 R programs** and **WP5 verification file** are available in a **zip folder** on the project intranet by following this link:
https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74848/novl_url/1

You will need to copy this **folder** as it is on the desktop of your computer (this action is detailed in the [slide 30-31](#))





2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps [\(page 10\)](#)

B. Installation of software [\(page 32\)](#)

C. Introduction to R studio [\(page 41\)](#)

D. Cleaning of the Rstudio interface [\(page 55\)](#)





2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

B. Installation of software

C. Introduction to R studio

D. Cleaning of the Rstudio interface





Preliminary steps

1st preliminary step : preparation of the T0 collection template [\(page 12\)](#)

2nd preliminary step : creation of the working folder [\(page 30\)](#)





Preliminary steps

1st preliminary step : preparation of the T0 collection template

- You must ensure that your T0 collection template is a **single file** with a **single tab** for all data collected during T0 (the 5 food categories in the same tab).
- Verifications/treatments on the data will only start once the template has been filled in **completely (when all products of the data collection have been entered in the template)**.
- As your T0 collection template contains many rows and drop-down menus, you will have to copy it into a **new .xlsx excel file** to keep only the filled rows and remove the drop-down menus.

see the following slides for a step-by-step explanation of this procedure





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

collection template T0 France.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... LAGUITTON Thomas Share

Clipboard Font Alignment Number Styles Cells Editing

A1 Product_code

	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
	Energy_as_consumed_kj	Energy_as_consumed_kCal	Fat_as_consumed	Saturated_fat_as_consumed	Carbohydrates_as_consumed	Sugar_as_consumed	Protein_as_consumed	Salt_as_consumed	Fibre_as_consumed	Comment	Category_code	Subcategory_code
226											3	215
227											3	611
228											3	252
229											3	215
230											3	218
231											3	614
232											3	615
233											1	745
234											1	681
235											1	143
236											1	676
237											1	386
238											1	680
239											1	739
240											1	745
241											1	386
242											1	386
243											1	386

Ready Average: 1,80227E+11 Count: 7209 Sum: 6,1169E+14 100%

1- In your T0 collection template, select all lines containing your data by scrolling manually until the last line that has been filled with your data.

Make sure to select only the lines with data and all the columns (from *Product_code* to *Subcategory_code*)





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

The screenshot shows the Microsoft Excel interface with the following details:

- File Name: collection template T0 France.xlsx - Excel
- User: LAGUITTON Thomas
- Worksheet: Template for data class
- Selected Range: AK1:AV243
- Context Menu Options: Cut, Copy (circled in red), Paste Options, Paste Special..., Smart Lookup, Insert..., Delete..., Clear Contents, Quick Analysis, Filter, Sort, Insert Comment, Format Cells..., Pick From Drop-down List..., Define Name..., Hyperlink..., Remove Hyperlinks
- Text Box: 2- Right-click and copy the selection

Energy_as_consumed_kJ	Energy_as_consumed_kCal	Fat_as_consumed	Hydrates_consumed	Sugar_as_consumed	Protein_as_consumed	Salt_as_consumed	Fibre_as_consumed	Comment	Category_code	Subcategory_code
									3	215
									3	611
									3	252
									3	215
									3	218
									1	680
									1	739
									1	745
									1	386
									1	386





Preliminary steps

The screenshot shows the Microsoft Excel interface with the 'Home' tab selected. The 'Paste' menu is open, showing options like 'Paste', 'Paste Values', and 'Paste Special...'. The 'Paste Values' option is highlighted. A text box in the center of the spreadsheet contains the following instructions:

3- Open a new excel file, empty

4- Paste your selection by using the option *Paste special > Paste Values*





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

Book1 - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... LAGUITTON Thomas Share

Clipboard Font Conditional Formatting Table Cell Insert Delete Format AutoSum Fill Sort & Find & Filter Select

AF39 1,5

Overview of your new .xlsx file with your data (without the drop-down menus)

Product_c	Father_pr	Country	Year	Category	Subcategory	Net_weig	Number
301		Poland	2021	Fresh_dai	Gourmet s	1,23E+12	No
302		Poland	2021	Fresh_dai	Classic sw	1,23E+12	No
303		Poland	2021	Fresh_dai	Fresh des	1,23E+12	Yes
304		Poland	2021	Fresh_dai	Dessert cr	1,23E+12	Yes
305		Poland	2021	Fresh_dai	Fresh mou	1,23E+12	Yes
306		Poland	2021	Fresh_dai	Fresh mou	1,23E+12	Yes
307		Poland	2021	Fresh_dai	Other fres	1,23E+12	Yes
308		Poland	2021	Fresh_dai	Fresh des	1,23E+12	Yes
309		Poland	2021	Fresh_dai	Dessert cr	1,23E+12	No
310		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No
311		Poland	2021	Soft_drink	Flavoured	1,23E+12	No
312		Poland	2021	Soft_drink	Tea bever	1,23E+12	No
313		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No
314		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No
315		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No
316		Poland	2021	Soft_drink	Colas with	1,23E+12	No
317		Poland	2021	Soft_drink	Fruit beve	1,23E+12	No
318		Poland	2021	Soft_drink	Flavoured	1,23E+12	No
319		Poland	2021	Breakfast	Energy dri	1,23E+12	No
320		Poland	2021	Breakfast	Traditiona	1,23E+12	No

Sheet1

Select destination and press ENTER or choose Paste

100%





Preliminary steps

1st preliminary step : preparation of the T0 collection template

- Now you have an **.xlsx file** containing only the lines with your data and without the drop-down menus.
You can rename it **T0 collection template *country*.xlsx** (with the name of your own country) for example.
- You must **make a copy** of this file (T0 collection template *country*.xlsx) and save it in **.csv format** under the name **T0_data_collection_ *country*.csv** (with the name of your own country)

The creation of this file in .csv format is very important because it is this file that will be used in the R software for the verification and indicator creation stages.

see the following slides for a step-by-step explanation of this procedure





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

collection template T0 France.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do...

Click on the tab *File*

	A	B	C	D	E	F	G	H	I	J
	Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owner
1	301		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	No	DANONE	Danone
2	302		Poland	2021	Fresh_dairy_products_and_desserts	Classic sweet yoghurts and fermented milks	1234567891011	No	Ehrmann Almighurt	
3	303		Poland	2021	Fresh_dairy_products_and_desserts	Fresh desserts without fruit	1234567891011	Yes	Deluxe	
4	304		Poland	2021	Fresh_dairy_products_and_desserts	Dessert creams and jellied milks	1234567891011	Yes	SÖBBEKE Pauls Biomolkerei	
5	305		Poland	2021	Fresh_dairy_products_and_desserts	Fresh mousse-type desserts	1234567891011	Yes	Gildo Rachelli	
6	306		Poland	2021	Fresh_dairy_products_and_desserts	Fresh mousse-type desserts	1234567891011	Yes	Weißenhörner Milch Manufaktur	
7	307		Poland	2021	Fresh_dairy_products_and_desserts	Other fresh plant-based desserts	1234567891011	Yes	Sojade	
8	308		Poland	2021	Fresh_dairy_products_and_desserts	Fresh desserts with cereals	1234567891011	Yes	SÖBBEKE Pauls Biomolkerei	
9	309		Poland	2021	Fresh_dairy_products_and_desserts	Dessert creams and jellied milks	1234567891011	No	SÖBBEKE Pauls Biomolkerei	
10	310		Poland	2021	Soft_drinks	Sugar-sweetened energy drinks	1234567891011	No	28 Black	
11	311		Poland	2021	Soft_drinks	Flavoured sugar-sweetened and artificially-sweetened water	1234567891011	No	Active O2	
12	312		Poland	2021	Soft_drinks	Tea beverages without added sugar	1234567891011	No	all i need.	
13	313		Poland	2021	Soft_drinks	Sugar-sweetened and artificially-sweetened tea beverages	1234567891011	No	Arizona	
14	314		Poland	2021	Soft_drinks	Sugar-sweetened colas	1234567891011	No	Black Jack	
15	315		Poland	2021	Soft_drinks	Sugar-sweetened fruit beverages	1234567891011	No	Capri-Sun	
16	316		Poland	2021	Soft_drinks	Colas without added sugar	1234567891011	No	Clever	
17	317		Poland	2021	Soft_drinks	Fruit beverages with fruit content > or = 50%	1234567891011	No	Curing Shot	
18	318		Poland	2021	Soft_drinks	Flavoured waters without added sugar	1234567891011	No	Waterdrop	

Ready





Preliminary steps

The screenshot shows the Microsoft Excel interface with the 'Export' menu open. The 'Export' option in the ribbon is circled in red. The main area displays the 'Export' task pane with the following content:

- Export**
- Create PDF/XPS Document** (highlighted in green)
- Change File Type**

Create a PDF/XPS Document

- Preserves layout, formatting, fonts, and images
- Content can't be easily changed
- Free viewers are available on the web

Create PDF/XPS

Go to *Export*





Preliminary steps

collection template TO Fran

Export

- Info
- New
- Open
- Save
- Save As
- Print
- Share
- Export
- Publish
- Close
- Account
- Options

Create PDF/XPS Document

Change File Type

Change File Type

Workbook File Types

- Workbook (*.xlsx)
Uses the Excel Spreadsheet format
- OpenDocument Spreadsheet (*.ods)
Uses the OpenDocument Spreadsheet format
- Macro-Enabled Workbook (*.xlsm)
Macro enabled spreadsheet
- Template (*.xltx)
Starting point for new spreadsheets
- Binary Workbook (*.xlsb)
Optimized for fast loading and saving

Other File Types

- Text (Tab delimited) (*.txt)
Text format separated by tabs
- Formatted Text (Space delimited) (*.prn)
Text format separated by spaces
- CSV (Comma delimited) (*.csv)**
Text format separated by commas
- Save as Another File Type

Save As

- 1- Select **Change File Type**
- 2- Select **CSV (Comma delimited)(*.csv)**
- 3- Press **Save As**





Preliminary steps

Save your file on your desktop under the name : ***TO_data_collection_country.csv*** (with the name of your own country)

The screenshot shows an Excel spreadsheet with a 'Save As' dialog box open. The dialog box is titled 'Save As' and shows the current location as 'Ce PC > Bureau'. The file name is 'TO_data_collection_France' and the save type is 'CSV (Comma delimited) (*.csv)'. A red circle highlights the file name field. A callout box with a green border contains the text: 'Save your file on your desktop under the name : ***TO_data_collection_country.csv*** (with the name of your own country)'. The spreadsheet in the background has columns labeled 'name', 'Bar_code', 'Assortment', 'Brand_name', and 'Brand_ow'. The data includes various beverage categories like 'ented milks', 'artificially-sweetened w', 'gar', 's-sweetened tea beverage', 'sugar-sweetened colds', 'Sugar-sweetened fruit beverages', 'Colas without added sugar', 'Fruit beverages with fruit content > or = 50%', and 'Flavoured waters without added sugar'. The status bar at the bottom indicates 'Ready' and '100%' zoom.





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

The screenshot shows the Microsoft Excel interface with a data table and an error dialog box. The data table has the following columns: Product_code, Father_product_code, Country, Year, Category_name, Subcategory_name, Bar_code, Assortment, Brand_name, and Brand_ow. The error dialog box, titled "Microsoft Excel", contains the following text:

The selected file type does not support workbooks that contain multiple sheets.

- To save only the active sheet, click OK.
- To save all sheets, save them individually using a different file name for each, or choose a file type that supports multiple sheets.

The "OK" button in the dialog box is circled in red. A green box with the text "Press OK" is overlaid on the dialog box. The status bar at the bottom of the Excel window shows "Ready" and "Template for data classificatio".

	A	B	C	D	E	F	G	H	I	J
	Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_ow
1										
2	301		Poland	2021				No	DANONE	Danone
3	302		Poland	2021				No	Ehrmann Almighurt	
4	303		Poland	2021				Yes	Deluxe	
5	304		Poland	2021				Yes	SÖBBEKE Pauls Biomolkerei	
6	305		Poland	2021				Yes	Gildo Rachelli	
7	306		Poland	2021				Yes	Weißenhornor Milch Manufa	
8	307		Poland	2021				Yes	Sojade	
9	308		Poland	2021	Fresh_dairy_products_and_desserts	Fresh desserts with cereals	1234567891011	Yes	SÖBBEKE Pauls Biomolkerei	
10	309		Poland	2021	Fresh_dairy_products_and_desserts	Dessert creams and jellied milks	1234567891011	No	SÖBBEKE Pauls Biomolkerei	
11	310		Poland	2021	Soft_drinks	Sugar-sweetened energv drinks	1234567891011	No	28 Black	
12	311		Poland	2021			011	No	Active O2	
13	312		Poland	2021			011	No	all i need.	
14	313		Poland	2021			011	No	Arizona	
15	314		Poland	2021	Soft_drinks	Sugar-sweetened colas	1234567891011	No	Black Jack	
16	315		Poland	2021	Soft_drinks	Sugar-sweetened fruit beverages	1234567891011	No	Capri-Sun	
17	316		Poland	2021	Soft_drinks	Colas without added sugar	1234567891011	No	Clever	
18	317		Poland	2021	Soft_drinks	Fruit beverages with fruit content > or = 50%	1234567891011	No	Curing Shot	
19	318		Poland	2021	Soft_drinks	Flavoured waters without added sugar	1234567891011	No	Waterdrop	





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

The screenshot shows the Microsoft Excel interface with a data table and a warning dialog box. The data table has the following columns: Product_code, Father_product_code, Country, Year, Category_name, Subcategory_name, Bar_code, Assortment, Brand_name, and Brand_ow. The dialog box asks: "Some features in your workbook might be lost if you save it as CSV (Comma delimited). Do you want to keep using that format?" The "Yes" button is circled in red.

Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_ow
301		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	No	DANONE	Danone
302		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	No	Ehrmann Almighurt	
303		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	Yes	Deluxe	
304		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	Yes	SÖBBEKE Pauls Biomolkerei	
305		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	Yes	Gildo Rachelli	
306		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	Yes	Weißenhornor Milch Manufak	
307		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	Yes	Sojade	
308		Poland	2021	Fresh_dairy_products_and_desserts	Fresh desserts with cereals	1234567891011	Yes	SÖBBEKE Pauls Biomolkerei	
309		Poland	2021	Fresh_dairy_products_and_desserts	Dessert creams and jellied milks	1234567891011	No	SÖBBEKE Pauls Biomolkerei	
310		Poland	2021	Soft_drinks	Sugar-sweetened energy drinks	1234567891011	No	28 Black	
311		Poland	2021	Soft_drinks	Sugar-sweetened energy drinks	1234567891011	No	Active O2	
312		Poland	2021	Soft_drinks	Sugar-sweetened energy drinks	1234567891011	No	all i need.	
313		Poland	2021	Soft_drinks	Sugar-sweetened energy drinks	1234567891011	No	Arizona	
314		Poland	2021	Soft_drinks	Sugar-sweetened colas	1234567891011	No	Black Jack	
315		Poland	2021	Soft_drinks	Sugar-sweetened fruit beverages	1234567891011	No	Capri-Sun	
316		Poland	2021	Soft_drinks	Colas without added sugar	1234567891011	No	Clever	
317		Poland	2021	Soft_drinks	Fruit beverages with fruit content > or = 50%	1234567891011	No	Curing Shot	
318		Poland	2021	Soft_drinks	Flavoured waters without added sugar	1234567891011	No	Waterdrop	





Preliminary steps



When you save your **.xlsx** file in **.csv format**, the barcodes in the **.csv file** appear in scientific writing (e.g. 1.89E+12).

It is necessary to select the column 'bar_codes' and change the column format to '**Number**' with **0 decimal digit**.

The bar codes will appear in full and you will not lose any information. You can then save this new version of your template with the full barcodes and overwrite the old one.

Be careful, as soon as you reopen this new **.csv file**, the barcodes will be written scientifically again and you will have to repeat this procedure.

We therefore invite you to do this procedure only once when you save the **.csv file** and not to reopen the saved file.

(To be read in R, the file must not be opened so you do not need to re-open it)

see the following slides for a step-by-step explanation of this procedure





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

	A	B	C	D	E	F	G	H	I	J
1	Product_code	Father_pr	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owner
41	340		Poland	2021	Delicatessen me	Dried, smoked or c	20426156	No	SaintAlby	
42	341		Poland	2021	Breakfast cereals	Filled cereals	3,56E+12	No	carrefour	
43	342		Poland	2021	Delicatessen me	Pâté	3,56E+12	No	Reflets de France	
44	343		Poland	2021	Delicatessen me	Pâté	3,25E+12	No	Reflets de France	
45	343		Poland	2021	Delicatessen me	Dry sausage	5,41E+12	No	Marcassou	
46	345		Poland	2021	Fresh dairy prod	Classic plain fresh c	5,4E+12	No	Carrefour	
47	346		Poland	2021	Fresh dairy prod	Artificially-sweete	20916626	No	Milbona	
48	347		Poland	2021	Fresh dairy prod	Dessert creams and	3,56E+12	No	Carrefour bio	
49	348		Poland	2021	Fresh dairy prod	Dessert creams and	3,03E+12	No	Danone	Danone
50	349		Poland	2021	Fresh dairy prod	Fresh sweetened s	5,41E+12	No	Alpro	
51	350		Poland	2021	Breakfast cereals	Sweet cereal flakes	27051832	No	Goldenbridge	
52	351		Poland	2021	Delicatessen me	Sausages	20773090	No	Lidl	
53	352		Poland	2021	Delicatessen me	Sausages	27013144	No	Pand	
54	353		Poland	2021	Delicatessen me	Pâté	27097168	No	Dçlif	
55	354		Poland	2021	Fresh dairy prod	Classic sweet yoghu	5,41E+12	No	Dano	
56	355		Poland	2021	Delicatessen me	Dry sausage	20501495	No	Delu	
57	356		Poland	2021	Bread products	Plain toasted bread	8,71E+12	No	Haus	
58	357		Poland	2021	Fresh dairy prod	Classic sweetened	27053417	Yes	Milsa	
59	358		Poland	2021	Fresh dairy prod	Classic plain fresh c	20669850	Yes	Milbo	
60	359		Poland	2021	Fresh dairy prod	Classic sweet yoghu	5,41E+12	Yes	PurNatur	
61	360		Poland	2021	Bread products	Puffed cakes	3,56E+12	No	Carrefour	
62	361		Poland	2021	Fresh dairy prod	Artificially-sweete	5,41E+12	No	Danone	Danone
63	362		Poland	2021	Delicatessen me	Pâté	5,4E+12	No	Carrefour	
64	363		Poland	2021	Delicatessen me	Cured ham	5,4E+12	No	Carrefour	
65	364		Poland	2021	Bread products	Other rusks	6,12E+11	No	Nairns	
66	365		Poland	2021	Bread products	Pre-packaged break	27046197	No	Délipain	
67	366		Poland	2021	Bread products	Wholemeal_cereal	7,31E+12	No	Krisprolls	
68	367		Poland	2021	Soft drinks	Flavoured milk bev	3,43E+12	No	Lactel	
69	368		Poland	2021	Bread products	Pre-packaged break	5,41E+13	No	Biaform	
70	369		Poland	2021	Soft drinks	Sugar-sweetened f	27002766	No	River	
71	370		Poland	2021	Soft drinks	Other beverages w	8,85E+12	No	UFC	
72	371		Poland	2021	Soft drinks	Colas without adde	4,06E+12	No	Pepsi	ion's
73	372		Poland	2021	Bread products	Other rusks	3,76E+12	No	Léanature)

Bar codes appearing in scientific format in your file
T0_data_collection_country.csv



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

	A	B	C	D	E	F	G	H	I	J
1	Product_code	Father_pr	Country	Year	Category_name	Subcategory_name	Bar_code		Brand_name	Brand_ownership
41	340		Poland	2021	Delicatessen me	Dried, smoked or c	2042		ntAlby	
42	341		Poland	2021	Breakfast cereals	Filled cereals	3,56		refour	
43	342		Poland	2021	Delicatessen me	Pâté	3,56		lets de France	
44	343		Poland	2021	Delicatessen me	Pâté	3,25		lets de France	
45	343		Poland	2021	Delicatessen me	Dry sausage	5,41		ccassou	
46	345		Poland	2021	Fresh dairy prod	Classic plain fresh c	5,4		refour	
47	346		Poland	2021	Fresh dairy prod	Artificially-sweete	2091		bona	
48	347		Poland	2021	Fresh dairy prod	Dessert creams and	3,56		refour bio	
49	348		Poland	2021	Fresh dairy prod	Dessert creams and	3,03		ione	Danone
50	349		Poland	2021	Fresh dairy prod	Fresh sweetened s	5,41		ro	
51	350		Poland	2021	Breakfast cereals	Sweet cereal flakes	2705		denbridge	
52	351		Poland	2021	Delicatessen me	Sausages	2077			
53	352		Poland	2021	Delicatessen me	Sausages	2701			
54	353		Poland	2021	Delicatessen me	Pâté	2709/168	No	Uclifin	
55	354		Poland	2021	Fresh dairy prod	Classic sweet yogh	5,41E+12	No	Danone	Danone
56	355		Poland	2021	Delicatessen me	Dry sausage	20501495	No	Deluxe	
57	356		Poland	2021	Bread products	Plain toasted bread	8,71E+12	No	Haust	
58	357		Poland	2021	Fresh dairy prod	Classic sweetened	27059647	Yes	Milsa	
59	358		Poland	2021	Fresh dairy prod	Classic plain fresh c	20669850	Yes	Milbo	
60	359		Poland	2021	Fresh dairy prod	Classic sweet yogh	5,41E+12	Yes	PurN	
61	360		Poland	2021	Bread products	Puffed cakes	3,56E+12	No	Carre	
62	361		Poland	2021	Fresh dairy prod	Artificially-sweete	5,41E+12	No	Danone	Danone
63	362		Poland	2021	Delicatessen me	Pâté	5,4E+12	No	Carrefour	
64	363		Poland	2021	Delicatessen me	Cured ham	5,4E+12	No	Carrefour	
65	364		Poland	2021	Bread products	Other rusks	6,12E+11	No	Nairs	
66	365		Poland	2021	Bread products	Pre-packaged brea	27046197	No	Délpain	
67	366		Poland	2021	Bread products	Wholemeal_cereal	7,31E+12	No	Krisprolls	
68	367		Poland	2021	Soft drinks	Flavoured milk bev	3,43E+12	No	Lactel	
69	368		Poland	2021	Bread products	Pre-packaged brea	5,41E+13	No	Biaform	
70	369		Poland	2021	Soft drinks	Sugar-sweetened f	27002766	No	River	
71	370		Poland	2021	Soft drinks	Other beverages w	8,85E+12	No	UFC	
72	371		Poland	2021	Soft drinks	Colas without adde	4,06E+12	No	Pepsi	
73	372		Poland	2021	Bread products	Other rusks	3,76E+12	No	Léanature	

Select the *Bar_codes* column, right click and go to **Format Cells**



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

The screenshot shows the Microsoft Excel interface with the 'Format Cells' dialog box open. The 'Number' tab is selected, and the 'Category' is set to 'Number'. The 'Decimal places' are set to 0. The 'Sample' text is 'Bar_code'. The 'Negative numbers' list shows '-1234', '1234', and '-1234'. The background spreadsheet has columns for Product_code, Father_pr, Country, Year, and Category.

	A	B	C	D	E
1	Product_code	Father_pr	Country	Year	Category
41	340		Poland	2021	Delicatessen
42	341		Poland	2021	Breakfast cereals
43	342		Poland	2021	Delicatessen
44	343		Poland	2021	Delicatessen
45	343		Poland	2021	Delicatessen
46	345		Poland	2021	Fresh dairy products
47	346		Poland	2021	Fresh dairy products
48	347		Poland	2021	Fresh dairy products
49	348		Poland	2021	Fresh dairy products
50	349		Poland	2021	Fresh dairy products
51	350		Poland	2021	Breakfast cereals
52	351		Poland	2021	Delicatessen
53	352		Poland	2021	Delicatessen
54	353		Poland	2021	Delicatessen
55	354		Poland	2021	Fresh dairy products
56	355		Poland	2021	Delicatessen
57	356		Poland	2021	Bread products
58	357		Poland	2021	Fresh dairy products
59	358		Poland	2021	Fresh dairy products
60	359		Poland	2021	Fresh dairy products
61	360		Poland	2021	Bread products
62	361		Poland	2021	Fresh dairy products
63	362		Poland	2021	Delicatessen meat
64	363		Poland	2021	Delicatessen meat
65	364		Poland	2021	Bread products
66	365		Poland	2021	Bread products
67	366		Poland	2021	Bread products
68	367		Poland	2021	Soft drinks
69	368		Poland	2021	Bread products
70	369		Poland	2021	Soft drinks
71	370		Poland	2021	Soft drinks
72	371		Poland	2021	Soft drinks
73	372		Poland	2021	Bread products

In the *Number* tab, choose the 'number' category, indicate '0' for decimal places and click OK



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

	A	B	C	D	E	F	G	H	I	J
1	Product_code	Father_pr	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owm
41	340		Poland	2021	Delicatessen me	Dried, smoked or c	20426156	No	SaintAlby	
42	341		Poland	2021	Breakfast cereals	Filled cereals	3560071013226	No	carrefour	
43	342		Poland	2021	Delicatessen me	Pâté	3560070976140	No	Reflets de France	
44	343		Poland	2021	Delicatessen me	Pâté	3245390135445	No	Reflets de France	
45	343		Poland	2021	Delicatessen me	Dry sausage	5410916000042	No	Marcassou	
46	345		Poland	2021	Fresh dairy prod	Classic plain fresh c	5400101000766	No	Carrefour	
47	346		Poland	2021	Fresh dairy prod	Artificially-sweete	20916626	No	Milbona	
48	347		Poland	2021	Fresh dairy prod	Dessert creams and	3560070917051	No	Carrefour bio	
49	348		Poland	2021	Fresh dairy prod	Dessert creams and	3033490143589	No	Danone	Danone
50	349		Poland	2021	Fresh dairy prod	Fresh sweetened s	5411188119586	No	Alpro	
51	350		Poland	2021	Breakfast cereals	Sweet cereal flakes	27051832	No	Goldenbridge	
52	351		Poland	2021	Delicatessen me	Sausages	20773090	No	Lidl	
53	352		Poland	2021	Delicatessen me	Sausages	27013144	No	Panda	
54	353		Poland	2021	Delicatessen me	Pâté	27097168	No	DÇlifin	
55	354		Poland	2021	Fresh dairy prod	Classic sweet yogh	5410146417061	No	Danone	Danone
56	355		Poland	2021	Delicatessen me	Dry sausage	20501495	No	Deluxe	
57	356		Poland	2021	Bread products	Plain toasted bread	8710445018233	No	Haust	
58	357		Poland	2021	Fresh dairy prod	Classic sweetened	27059647	Yes	Milsani	
59	358		Poland	2021	Fresh dairy prod	Classic plain fresh c	20669850	Yes	Milbona	
60	359		Poland	2021	Fresh dairy prod	Classic sweet yogh	5412971116287	Yes	PurNatur	
61	360		Poland	2021	Bread products	Puffed cakes	3560070600946	No	Carrefour	
62	361		Poland	2021	Fresh dairy prod	Artificially-sweete	5410146416026	No	Danone	Danone
63	362		Poland	2021	Delicatessen me	Pâté	5400101007635	No	Carrefour	
64	363		Poland	2021	Delicatessen me	Cured ham	5400101063365	No	Carrefour	
65	364		Poland	2021	Bread products	Other rusks	612322000738	No	Nairns	
66	365		Poland	2021	Bread products	Pre-packaged brea	27046197	No	Délipain	
67	366		Poland	2021	Bread products	Wholemeal_cereal	7311070331318	No	Krisprolls	
68	367		Poland	2021	Soft drinks	Flavoured milk bev	3428271180011	No	Lactel	
69	368		Poland	2021	Bread products	Pre-packaged brea	54107246001113	No	Biaform	
70	369		Poland	2021	Soft drinks	Sugar-sweetened f	27002766	No	River	
71	370		Poland	2021	Soft drinks	Other beverages w	8850025000026	No	UFC	
72	371		Poland	2021	Soft drinks	Colas without adde	4060800105882	No	Pepsi	
73	372		Poland	2021	Bread products	Other rusks	3760020508371	No	Léanature	

Your barcodes appear in full, you can save this table by overwriting the previous version and close it.

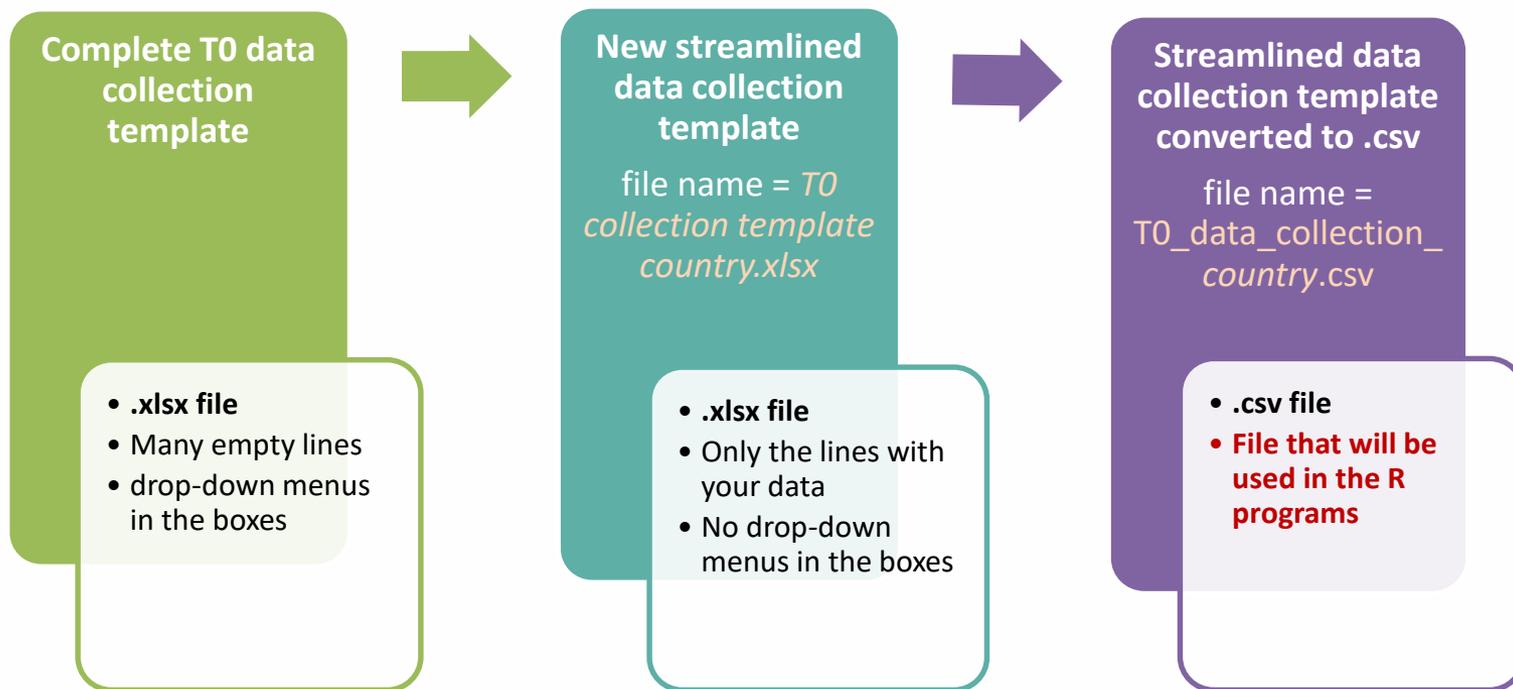
Please note! If you open this file again, you will have to do the same operation again. The numbers are automatically converted to scientific format when opening a .csv file.



Preliminary steps

1st preliminary step : preparation of the T0 collection template

Summary of the manipulations in the 1st preliminary step





Preliminary steps

2nd preliminary step : creation of the working folder

portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/binderId/16636/entityType/workspace/action/view_permalink/novl_url/1#1652885824872

Nacionalni inštitut za javno zdravje

Domov eMail HelpDesk Ura Potni nalog Internet Geslo

Laure Barbier

My Workspace What's New My Favorites My Teams Recent Places View

WORKING DOCUMENTS

WORKSPACES & FOLDERS

Discussion

Files

Data analysis

T0 statistics programs (training)

Data collections

Draft deliverables

New technologies and sources

Priority food groups

Milestones

Photo Album

Tasks

Trash

Home Workspace Best-ReMaP WPS WORKING DOCUMENTS Files Data analysis

T0 statistics programs (training)

New Share Delete Add Files... More

Title	Size	State	Author	Date
T0_statistics_programs.zip	1 KB		Laure Barbier	18 May 2022, 16:58

Filter List

➤ You must download the zip folder called 'T0_statistics_program.zip' from the Best-ReMaP intranet and copy it on your desktop

➤ You must unzip this folder before using it

Permalinks, Email Addresses, RSS Links, and WebDAV URL





Preliminary steps

2nd preliminary step : creation of the working folder

It is very important that you don't change any names of the files that are listed here (except the file with your collected and encoded data)

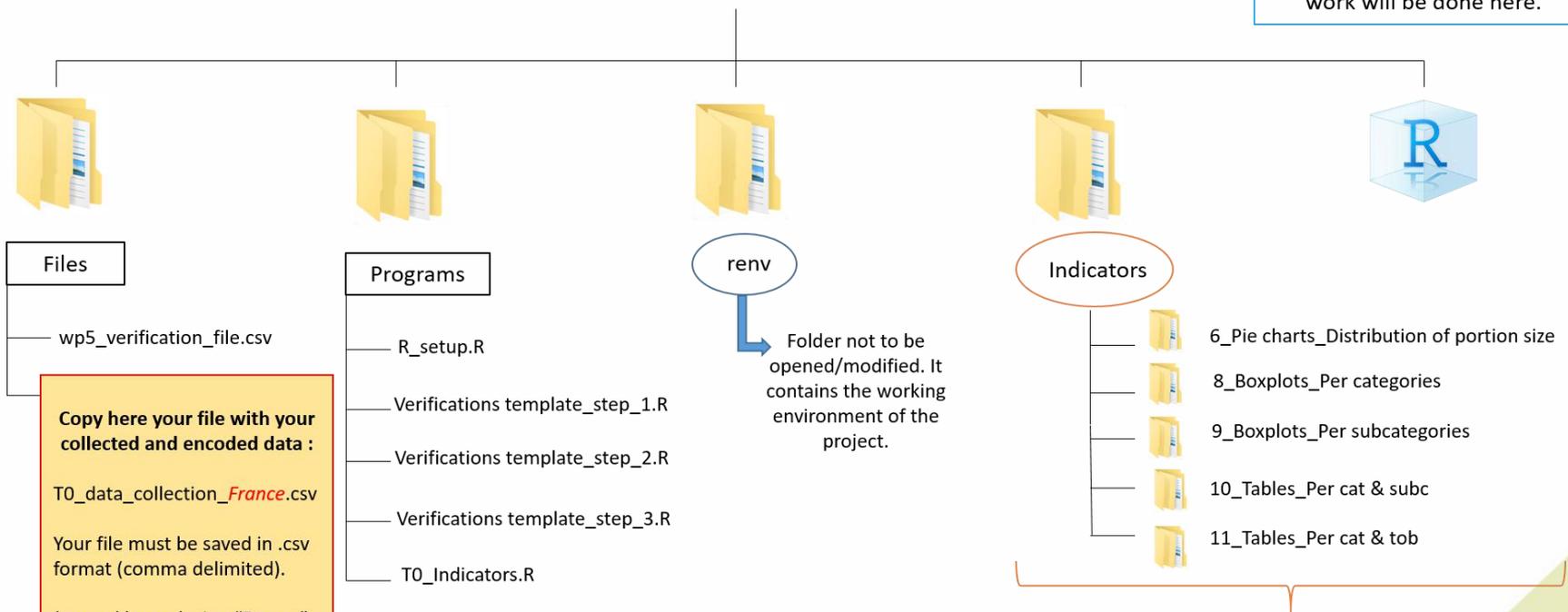
Please copy this file directly on your desktop



T0_statistics_programs

T0_statistics_programs.Rproj

= This is the project you need to open for the task. All the work will be done here.



Copy here your file with your collected and encoded data :

T0_data_collection_France.csv

Your file must be saved in .csv format (comma delimited).

(named by replacing "France" with your country)

Folder not to be opened/modified. It contains the working environment of the project.

= folders where all the figures and tables that will be created by the indicator program and be included in the report will be stored





2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

B. Installation of software

C. Introduction to R studio

D. Cleaning of the Rstudio interface





Installation of R software

- **Download the R software:**

Follow this link and select **version 4.1.2** (which is not the latest version but the version on which the programs were created):

<https://cran.r-project.org/bin/windows/base/old/>



Previous Releases of R for Windows

This directory contains previous binary releases of R for Windows.

The current release, and links to development snapshots, are available [here](#). Source code for these releases and other

In this directory:

- [R 4.2.0](#) (April, 2022)
- [R 4.1.3](#) (March, 2022)
- [R 4.1.2](#) (November, 2021)
- [R 4.1.1](#) (August, 2021)
- [R 4.1.0](#) (May, 2021)
- [R 4.0.5](#) (March, 2021)
- [R 4.0.4](#) (February, 2021)
- [R 4.0.3](#) (October, 2020)
- [R 4.0.2](#) (June, 2020)
- [R 4.0.1](#) (June, 2020)
- [R 4.0.0](#) (April, 2020)
- [R 3.6.3](#) (February, 2020)
- [R 3.6.2](#) (December, 2019)
- [R 3.6.1](#) (July, 2019)
- [R 3.6.0](#) (April, 2019)

Version of R to download (click on the link)

If you already have R on your computer, check which version of the software you have.

If it is a version **other than 4.1.2**, then you need to download version **4.1.2** as shown.

→ You will have **2 versions of R** on your computer.

see the following slide for next step





Installation of R software

- **Download the R software:**

Follow this link and select **version 4.1.2** (which is not the latest version but the version on which the programs were created):

<https://cran.r-project.org/bin/windows/base/old/>



Index of /bin/windows/base/old/4.1.2

Name	Last modified	Size	Description
Parent Directory	-		
NEWS.R-4.1.2.html	2021-11-01 19:14	105K	
R-4.1.2-win.exe	2021-11-01 20:30	86M	
README.R-4.1.2	2021-11-01 19:14	8.5K	
SVN-REVISION.R-4.1.2	2021-11-01 19:14	46	
md5sum.txt	2021-11-01 20:30	50	
release.html	2021-11-01 19:14	90	
rw-FAQ.html	2021-11-01 19:14	99K	

- Click to download this .exe file.
- Once you have downloaded this file, you can open it and click on 'Run'.
- The R software will then be installed on your computer.

Apache Server at cran.r-project.org Port 443

During the software installation, accept all the basic settings by clicking 'next' at each step





Installation of R software

Tutorial video to download and install the R software

→ *This video is available at any time on the Best ReMaP intranet in the WP5 section*
https://portal.nijz.si/ssf/a/c/p_name/ssf_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74767/novl_url/1





Installation of Rstudio software

- **Download the Rstudio software:**

Follow this link :

<https://www.rstudio.com/products/rstudio/download/>

Join us at **rstudio::conf(2022)** to sharpen your R skills. | July 25-28th in D.C. [LEARN MORE](#)

R Studio

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Download the RStudio IDE

Choose Your Version

The RStudio IDE is a set of integrated tools designed to help you be more productive with R and Python. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools

R Studio Team

RStudio's recommended professional data science solution for every team. RStudio

When you are on this page, scroll down to find the links to all the Rstudio installers (see next slide)





Installation of Rstudio software

Download the RStudio IDE - RSti... x

https://www.rstudio.com/products/rstudio/download/

All Installers

Linux users may need to [import RStudio's public code-signing key](#) prior to installation, depending on the operating system's security policy.

RStudio requires a 64-bit operating system. If you are on a 32 bit system, you can use an [older version of RStudio](#).

OS	Download	Size	SHA-256
Windows 10/11	RStudio-2022.02.2-485.exe	177.27 MB	74187a33
macOS 10.15+	RStudio-2022.02.2-485.dmg	217.09 MB	cda82e98
Ubuntu 18+/Debian 10+	rstudio-2022.02.2-485-amd64.deb	128.58 MB	508a6e9c
Fedora 19/Red Hat 7	rstudio-2022.02.2-485-x86_64.rpm	144.66 MB	7400234c
Fedora 34/Red Hat 8	rstudio-2022.02.2-485-x86_64.rpm	144.70 MB	ad00e2c5
Debian 9	rstudio-2022.02.2-485-amd64.deb	128.91 MB	8edcf614
OpenSUSE 15	rstudio-2022.02.2-485-x86_64.rpm	129.31 MB	e54c69f6

- Click to download this .exe file.
- Once you have downloaded this file, you can open it and click on 'Run'.
- The Rstudio software will then be installed on your computer.

During the software installation, accept all the basic settings by clicking 'next' at each step





Installation of Rstudio software

Tutorial video to download and install the Rstudio software

→ *This video is available at any time on the Best ReMaP intranet in the WP5 section*
https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74768/novl_url/1



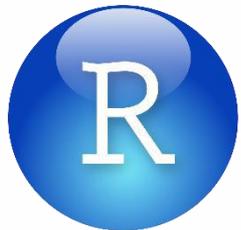


Overview of R et Rstudio interfaces



'R'

- No processing will be done on this interface
- Software needed to be able to work on Rstudio



'Rstudio'

- Interface that allows the software to be used = environment that facilitates input, code execution and visualisation of results
- Programs will be running through RStudio





Overview of R



```
RGui (64-bit) - [R Console]
Fichier Edition Voir Misc Packages Fenêtres Aide

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R est un logiciel libre livré sans AUCUNE GARANTIE.
Vous pouvez le redistribuer sous certaines conditions.
Tapez 'license()' ou 'licence()' pour plus de détails.

R est un projet collaboratif avec de nombreux contributeurs.
Tapez 'contributors()' pour plus d'information et
'citation()' pour la façon de le citer dans les publications.

Tapez 'demo()' pour des démonstrations, 'help()' pour l'aide
en ligne ou 'help.start()' pour obtenir l'aide au format HTML.
Tapez 'q()' pour quitter R.

> |
```

Overview of the R software when you open it

This is just for information purposes as you will not be working on this software but on the **Rstudio interface**.



2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

B. Installation of software

C. Introduction to R studio

D. Cleaning of the Rstudio interface





Introduction to Rstudio software

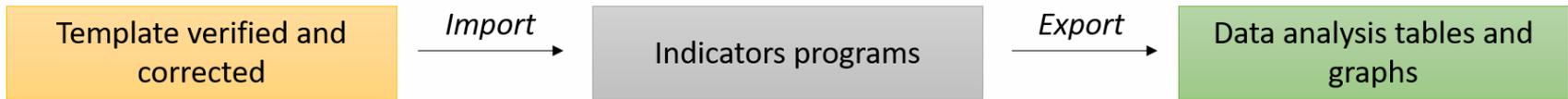
How does data processing software like Rstudio work?





Introduction to Rstudio software

How will the Rstudio data processing software work in Task 5.3.2?





Introduction to Rstudio software

Overview of the Rstudio software when you open it for the first time.

The screenshot displays the RStudio interface. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. The main window is divided into several panes:

- Console:** Shows the R version (4.1.2) and the R startup message, including copyright information and instructions on how to use R.
- Environment:** Displays "Environment is empty".
- Files:** Shows the file explorer for the project directory, listing files such as .RData, .Rhistory, .Rprofile, Files, Indicators, Programs, renv, renv.lock, and T0_statistics_programs.Rproj.

Two callout boxes provide additional context:

- A green box on the right side of the Environment pane states: « Environment » that displays the "working tools" (variables, tables, functions) created by the program.
- A teal box at the bottom left of the Console pane states: « Console » that displays information about a program running, where you can see the execution of a program.





WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

How to open a program in Rstudio

Path to the folder where the R program you want to open is located

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2020
.Rhistory	14.8 KB	May 6, 2020
.Rprofile	25 B	May 4, 2020
Files		
Indicators		
Programs		
revn		
revn.lock	36.4 KB	May 4, 2020
T0_statistics_programs.Rproj	218 B	May 6, 2020





Introduction to Rstudio software

Rstudio when a program is opened

The screenshot displays the RStudio interface with three main panes:

- Source Editor:** Shows an R script file named "Verifications template_step_1.R". The script content includes:

```
##### FIRST PROGRAMME OF VERIFICATION
#Version of R used : 4.1.2
#Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs th
###IMPORTANT : R software must be installed on your computer (https://www.r-project.org/en/about/rstudio)
#
#
##dplyr : 1.0.7
##tidyverse : 1.3.1
#Load the necessary packages each time you open Rstudio for the following reasons below
library("dplyr")
library("tidyverse")
#SET PARAMETERS :
#You will need to personalize the variables below with your own country
##Input file (csv) name :
#Indicate ("the_name_of_your_file.csv") - here you need to indicate the name of your file
input_file="T0_data_collection_France.csv"
##Verification file (csv) name :
##The csv file should be saved in the same folder as the one containing your data set in csv
verification_file="wp5_verification_file.csv"
```
- Environment Pane:** Shows "Global Environment" with "Environment is empty". A green box highlights the text: « Environment » is still here.
- Console:** Shows the R version and platform information: "R 4.1.2 · C:/Users/tlaguitton/Desktop/T0_statistics_programs/". A teal box highlights the text: « Console » appears here.

Annotations in the image include a red circle around the script file name in the top-left pane, a red arrow pointing to the script content, and a red box around the entire source editor area.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs th
5 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3.1
10
11 #Load the necessary packages each time you open Rstudio for running the program with the functions below
12 library("dplyr")
13 library("tidyverse")
14
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameters
18
19 ##Input file (csv) name :
20 #Indicate ("the_name_of_your_file.csv") - here you need to replace "France" by the
21 input_file="T0_data_collection_France.csv"
22
23 ##Verification file (csv) name :
24 ##The csv file should be saved in the same folder as the one containing your data
25 verification_file="wp5_verification_file.csv"
26
27
```

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (c) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Description of a program

- Lines preceded by a # and appearing all in green are comments in the program. These lines are there to describe the program and will not be run in the program.
- The other lines without a # are the **commands** that will run in the program.





WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

Modification of the program script

- For all programs you will have to make small changes (very few, only on the set parameters part).
- You can modify directly in the script and press the **save button** to save the modifications to the script.

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs th
5 ###IMPORTANT : R
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3
10
11 #Load the necessa
12 library("dplyr")
13 library("tidyvers
14
15
16 #SET PARAMETERS
17 #You will need to
18
19 ##input file (csv
20 #Indicate ("the_r
21 input_file="T0_da
22
23
```





WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

How to run a command

To run a command, simply select it (as shown in the image) and click on the **'Run' button** (or Ctrl+Enter).

```
##### FIRST PROGRAMME OF VERIFICATION
#Version of R used : 4.1.2
#Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs th
##IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
##dplyr : 1.0.7
##tidyverse : 1.3.1
#Load the necessary packages each time you open Rstudio for running the program with the functions below
library("dplyr")
library("tidyverse")
#SET PARAMETERS :
#You will need to personalize the variables below with your parameters
##Input file (csv) name :
#Indicate ("the_name_of_your_file.csv") - here you need to replace "France" by the name of y
input_file="T0_data_collection_France.csv"
##verification file (csv) name :
##The csv file should be saved in the same folder as the one containing your data set in csv
verification_file="wp5_verification_file.csv"
```

R 4.1.2 · C:/Users/tlaguitton/Desktop/T0_statistics_programs/

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

File	Size	Modified
.Rhistory	14.8 KB	May 6,
.Rprofile	25 B	May 4,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4,
T0_statistics_programs.Rproj	218 B	May 8,





WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs th
5 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3.1
10
11 #Load the necessary packages each time you open Rstudio for running the program v
12 library("dplyr")
13 library("tidyverse")
14
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameters
18
19 ##Input file (csv) name :
20 #Indicate ("the_name_of_your_file.csv") - here you need to replace "France" by th
21 input_file="T0_data_collection_France.csv"
22
23 ##verification file (csv) name :
24 ##The csv file should be saved in the same folder as the one containing your data
25 verification_file="wp5_verification_file.csv"
26
27
```

How to run an entire program

It is also possible to run all the commands at once. To do this, simply **select the entire program (Ctrl+A)** and click on **'Run'**. The comment lines (with # and in green) will not be run but all other commands will be run one by one.

This is what you will have to do for each program in this task! You will have to run the whole programs at once and not command by command.

R 4.1.2 · C:/Users/t.laguillon/Desktop/T0_statistics_programs/

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

File	Size	Date
renv		
renv.lock	36.4 KB	May 4,
T0_statistics_programs.Rproj	218 B	May 8,





Introduction to Rstudio software

While a program is running

Some programs can take a long time to run...

In this case, a **'stop'** button appears at the top left of the console and indicates that the program is currently running (nothing may appear in the console for a few minutes).

During a long program, you can click on this **'stop'** button at any time to suspend the program. To restart the program, you will need to reselect the entire program script and click on **'Run'** again } **Not recommended**

```
n outlier
+   }
+   else{
+     pb_outliers<-base::append(pb_outliers," ") #If TRUE is indicated, nothing is added to the list pb_outliers
+   }
+ pb_outliers<-base::paste(pb_outliers,sep=" ", collapse=" ") #concatenate all the information from the pb_outli
ers list
+ Step3_T0_data[i,"Problems_outlier"]<-pb_outliers #add this concatenated information in the right column/line f
rom your Step3_T0_data table
+ }
+ }
```





Introduction to Rstudio software

The screenshot shows the RStudio interface with the following components:

- Script Editor:** Contains R code for a verification program. Comments are in black, and code is in blue. The code includes package loading, parameter setting, and file writing instructions.
- Environment Panel:** Shows the current environment with variables: `line_num` (238 obs. of 3 variables), `T0_data` (241 obs. of 56 variables), and `T0_data_5` (241 obs. of 122 variables).
- Console:** Shows the output of the R script. The output is in blue, indicating successful execution. A blue arrow points from the console output to the callout box.

After running an entire program

- After running the entire program, comments are displayed in the console. In most cases, the messages in the console are displayed in **black** or **blue** and mean that the command has been completed.
- If a message appears in **red** or is preceded by a **'warning'**, it may mean that a command did not work and in this case it is probably a problem coming from an imported file. Either you can find the problem and correct it, or you can contact us for help.
- Note that the installation of packages displays a red message in the console, this is normal and is not an error.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

The screenshot displays the RStudio environment with the following components:

- Script Editor:** Contains R code for a verification program, including package loading and parameter setting.
- Environment:** Shows the current R session with 231 MiB of memory used and a data object named 'line_num' with 238 observations and 3 variables.
- Console:** Shows the execution of the script, including the command `utils::write.csv2(T0_data_f1,file= output_file,na=" ",row.names=FALSE)` and its output.
- File Explorer:** Shows the file structure of the project, including folders like .RData, .Rhistory, .Rprofile, Files, Indicators, Programs, renv, and renv.lock.

Callout Box: After running an entire program, you can enlarge or shrink the console window using the quadruple arrow that appears when you move the mouse cursor over the top of the console.





Introduction to Rstudio software

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains an R script with comments and code. A green box highlights the text "After running an entire program".
- Environment Pane:** Lists data objects created during the run:

Object	Obs.	Vars.
line_num	238	3
T0_data	241	56
T0_data_5	241	122
T0_data_f1	241	49
Verificati...	119	8
- Files Pane:** Shows the file explorer for the 'T0_statistics_programs' folder, listing files like .RData, .Rhistory, .Rprofile, and various folders.

Text in the Source Editor:

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs th
5 #####
6
7
8 ##dp
9 ##ti
10
11 #Loa
12 libr
13 libr
14
15
16 #SET
17 #You
18
19 ##In
20 #Ind
21 input
22
23 ##ve
24
```

Text in the Environment Pane:

values

```
bar_code_c... num [1:241] 1234567891011 123...
carbohydra... " "
carbohydra... NULL
energy_as... " "
energy_as... " "
```

Text in the Files Pane:

```
..
.RData 125.9 KB May 3,
.Rhistory 18.8 KB May 8,
.Rprofile 25 B May 4,
Files
Indicators
Programs
renv
renv.lock 36.4 KB May 4,
T0_statistics_programs.Rproj 218 B May 8,
```

- Other elements may appear after running the entire program.
 - ❑ Tables in tabs next to the program script. These tables are working tools for the program and you don't need to look at them.
 - ❑ These program tables/tools also appear in the environment, which is no longer empty at the end of the program run.
- **The program outputs that you have to work on will automatically be saved as excel files in the 'Files' folder of the 'T0_statistics_programs' folder.**



2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

B. Installation of software

C. Introduction to R studio

D. Cleaning of the Rstudio interface





WORK Package 5 – Reformulation and processed food monitoring

'Cleaning' of Rstudio between each program

Cleaning Rstudio interface (1)

Between each verification program and each run of a program, you must 'clean' the 'T0_statistics_programs - Rstudio' interface.

First, you must delete all the tables/tools that have been created and the script of the program.

To do this, simply click on the small crosses at the top right of each tab.

Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar_code
1	18	Poland	2021	Soft_drinks	Sugar-sweetened plant-based beverages	123456
2	23	Poland	2021	Soft_drinks	Plant-based beverages without added sugar	123456
3	41	Poland	2021	Soft_drinks	Sugar-sweetened and artificial	
4	50	Poland	2022	Soft_drinks	Other sports drinks	
5	55	Poland	2021	Soft_Drinks	Sugar-sweetened fruit beverag	
6	65	Poland	2022	Soft_drinks	Sugar-sweetened fruit beverag	
7	66	Poland	2022	Soft_drinks	Flavoured sugar-sweetened wa	
8	67	Poland	2022	Soft_drinks	Flavoured waters without adde	
9	68	Poland	2022	Soft_drinks	Sugar-sweetened and artificial	
10	76	Poland	2021	Soft_Drinks	Fruit beverages with fruit conte	
11	87	Poland	2021		Colas without added sugar	
12	94	Poland	2022	Soft_drinks	Flavoured waters without adde	
13	95	Poland	2022	Soft_drinks	Sugar-sweetened energy drink	
14	97	Poland	2022	Soft_drinks	Sugar-sweetened tea beverage	

```
R 4.1.2 · C:/Users/Llaguiton/Desktop/T0_statistics_programs/Files/
> ##utils::write.csv2 uses a comma for the decimal point and a semicolon for the separator
r CSV files in some western European locales.
> ##If the Excel convention is different in your country, please use the function write.csv(T0_data_f1,file="Test_T
0_data_f1.2.csv",na=" ",sep="|",dec=".",row.names=FALSE)
>
> #The file should appear in the folder in which you have set the working directory at the beginning of this program
(i.e. the folder in which you had saved you data set)
> |
```

Environment	History	Connections	Tutorial
R	Import	231 MiB	
Global Environment			
Data			
line_num	238 obs. of 3 variables		
T0_data	241 obs. of 48 variables		

Programs	Size	Date
Programs		
renv		
renv.lock	36.4 KB	May 4,
T0_statistics_programs.Rproj	218 B	May 10





WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program

The screenshot shows the RStudio interface with the following components:

- Console:** Contains R code for data manipulation, including concatenating problem columns, trimming spaces, and exporting data to a CSV file.
- Environment:** Shows the current workspace with objects like 'line_num', 'T0_data', 'T0_data_5', and 'T0_data_f1'. A red circle highlights the broom icon (Clear objects from the workspace) at the top right of the pane.
- Files:** Shows the current working directory as 'C:/Users/t.laguitton/Desktop/T0_statistics_programs/Files/'.

Cleaning Rstudio interface (2)

Then, you will need to clean the working environment.

To do this, you must click on the broom at the top right of the environment.





WORK Package 5 – Reformulation and processed food monitoring

'Cleaning' of Rstudio between each program

The screenshot shows the RStudio interface with a script being executed in the console. A dialog box titled "Confirm Remove Objects" is displayed, asking "Are you sure you want to remove all objects from the environment? This operation cannot be undone." The "Include hidden objects" checkbox is checked, and the "Yes" button is circled in red.

Cleaning Rstudio interface (3)

You need to click 'Yes' and make sure the box 'Include hidden objects' is checked.

```
R 4.1.2 · C:/Users/t.laguillon/Desktop/T0_statistics_programs/Files/
> #Concatenate the pb columns in one column Problems
> T0_data_5$Problems<-base::paste(T0_data_5$pb_1,T0_data_5$pb_2,T0_data_5$pb_3,T0_data_5$pb_4,T0_data_5$pb_5.a,T0_data_5$pb_5.b,T0_data_5$pb_6.a,T0_data_5$pb_6.b,T0_data_5$pb_7,T0_data_5$pb_8,T0_data_5$pb_9,T0_data_5$pb_10,T0_data_5$pb_11,T0_data_5$pb_12,T0_data_5$pb_13,T0_data_5$pb_14,T0_data_5$pb_15,T0_data_5$pb_16,T0_data_5$pb_17,T0_data_5$pb_18,T0_data_5$pb_19,T0_data_5$pb_20,T0_data_5$pb_21,T0_data_5$pb_22,T0_data_5$pb_23,T0_data_5$pb_24,T0_data_5$pb_25,T0_data_5$pb_26,T0_data_5$pb_27,T0_data_5$pb_28,T0_data_5$pb_29,T0_data_5$pb_30,T0_data_5$pb_31,T0_data_5$pb_32,T0_data_5$pb_33,T0_data_5$pb_34,T0_data_5$pb_35,T0_data_5$pb_36,T0_data_5$pb_37,T0_data_5$pb_38,T0_data_5$pb_39,T0_data_5$pb_40,T0_data_5$pb_41,T0_data_5$pb_42,sep=" ")
>
> #trim_string : function that will suppress all superfluous spaces
> trim_string<-function(string) base::gsub("\\s+", " ", base::gsub("^\\s+|\\s+$", "", string))
>
> #Apply the function trim_string on T0_data_5$Problems to
> T0_data_5$Problems<-trim_string(T0_data_5$Problems)
>
> #Add "/" between the different terms 'problem' (i.e. replace
> T0_data_5$Problems<-base::gsub(" ", " / ",T0_data_5$Problems)
>
>
> #Create the T0_data_f1 which regroupes your data and the
> T0_data_f1<-dplyr::select(T0_data_5,"Product_code":"subcategory_code","Problems")
> View(T0_data_f1)
>
> #Export the T0_data_f1
> utils::write.csv2(T0_data_f1,file= output_file,na=" ",row.names=FALSE)
>
> ###utils::write.csv2 uses a comma for the decimal point and a semicolon for the
> r CSV files in some western European locales.
> ###If the Excel convention is different in your country, please use the function
> T0_data_f1.2.csv",na=" ",sep="|",dec=".",row.names=FALSE)
>
> #The file should appear in the folder in which you have set the working director
> (i.e. the folder in which you had saved your data set)
> |
```



WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program

```
R 4.1.2 · C:/Users/t.laguitton/Desktop/T0_statistics_programs/Files/
> #Concatenate the pb columns in one column Problems
> T0_data_5$Problems<-base::paste(T0_data_5$pb_1,T0_data_5$pb_2,T0_data_5$pb_3,T0_data_5$pb_4,T0_data_5$pb_5.a,T0_data_5$pb_5.b,T0_data_5$pb_6.a,T0_data_5$pb_6.b,T0_data_5$pb_7,T0_data_5$pb_8,T0_data_5$pb_9,T0_data_5$pb_10,T0_data_5$pb_11,T0_data_5$pb_12,T0_data_5$pb_13,T0_data_5$pb_14,T0_data_5$pb_15,T0_data_5$pb_16,T0_data_5$pb_17,T0_data_5$pb_18,T0_data_5$pb_19,T0_data_5$pb_20,T0_data_5$pb_21,T0_data_5$pb_22,T0_data_5$pb_23,T0_data_5$pb_24,T0_data_5$pb_25,T0_data_5$pb_26,T0_data_5$pb_27,T0_data_5$pb_28,T0_data_5$pb_29,T0_data_5$pb_30,T0_data_5$pb_31,T0_data_5$pb_32,T0_data_5$pb_33,T0_data_5$pb_34,T0_data_5$pb_35,T0_data_5$pb_36,T0_data_5$pb_37,T0_data_5$pb_38,T0_data_5$pb_39,T0_data_5$pb_40,T0_data_5$pb_41,T0_data_5$pb_42,sep=" ")
>
> #trim_string : function that will suppress all superfluous spaces
> trim_string<-function(string) base::gsub("\\s+", " ", base::gsub("^\\s+|\\s+$", "", string))
>
> #Apply the function trim_string on T0_data_5$Problems to remove the superfluous spaces
> T0_data_5$Problems<-trim_string(T0_data_5$Problems)
>
> #Add "/" between the different terms 'problem' (i.e. replace the spaces by /)
> T0_data_5$Problems<-base::gsub(" ", "/ ",T0_data_5$Problems)
>
> #Create the T0_data_f1 which regroups your data and the problems that needs to be verified concatenated in one column "Problems"
> T0_data_f1<-dplyr::select(T0_data_5,"Product_code":"Subcategory_code","Problems")
> View(T0_data_f1)
>
> #Export the T0_data_f1
> utils::write.csv2(T0_data_f1,file= output_file,na=" ",row.names=FALSE)
>
> ###utils::write.csv2 uses a comma for the decimal point and a semicolon for the
> r CSV files in some western European locales.
> ###If the Excel convention is different in your country, please use the functi
> 0_data_f1.2.csv",na=" ",sep="|",dec=".",row.names=FALSE)
>
> #The file should appear in the folder in which you have set the working direct
> (i.e. the folder in which you had saved you data set)
>
|
```

Cleaning Rstudio interface (4)

Then you have to clean the console by clicking on the transparent broom at the top right of the console.





WORK Package 5 – Reformulation and processed food monitoring

'Cleaning' of Rstudio between each program

The screenshot shows the RStudio interface for a project named 'T0_statistics_programs'. The console is empty, and the Environment pane shows 'Environment is empty'. A file explorer window is open in the background showing the project directory.

Environment History Connections Tutorial
R Global Environment
Environment is empty

Files Plots Packages Help Viewer
New Folder Delete Rename More
C: > Users > t.laguitton > Desktop > T0_statistics_programs
Name Size Modified
..
.RData 125.9 KB May 3,
.Rhistory 31.2 KB May 9,
.Rprofile 25 B May 4,
Files
Indicators
Programs
renv
renv.lock 36.4 KB May 4,
T0_statistics_programs.Rproj 218 B May 10

Cleaning Rstudio interface (5)

Your 'T0_statistics_programs - Rstudio' interface is cleaned up and ready for the next program.





WORK Package 5 – Reformulation and processed food monitoring

'Cleaning' of Rstudio between each program

The screenshot shows the RStudio interface with a 'Quit R Session' dialog box open. The dialog box asks: 'Save workspace image to C:/Users/t.laguitton/Desktop/T0_statistics_programs/.RData?'. The 'Don't Save' button is circled in red. The background shows the R console with version information and the Environment pane which is empty.

Cleaning Rstudio interface (6)

When you then close your Rstudio interface, Rstudio will offer to save the workspace image (this is different from saving the modified program script). Here you don't need to save the workspace so you can click on ***Don't Save***.





3) Running of the programs

A. Part 1 : R setup program ([page 71](#))

B. Part 2 : Verification programs and template cleaning/standardization ([page 81](#))

i. 1st verification program : 'Verifications template_step_1' ([page 83](#))

ii. 2nd verification program : 'Verifications template_step_2' ([page 112](#))

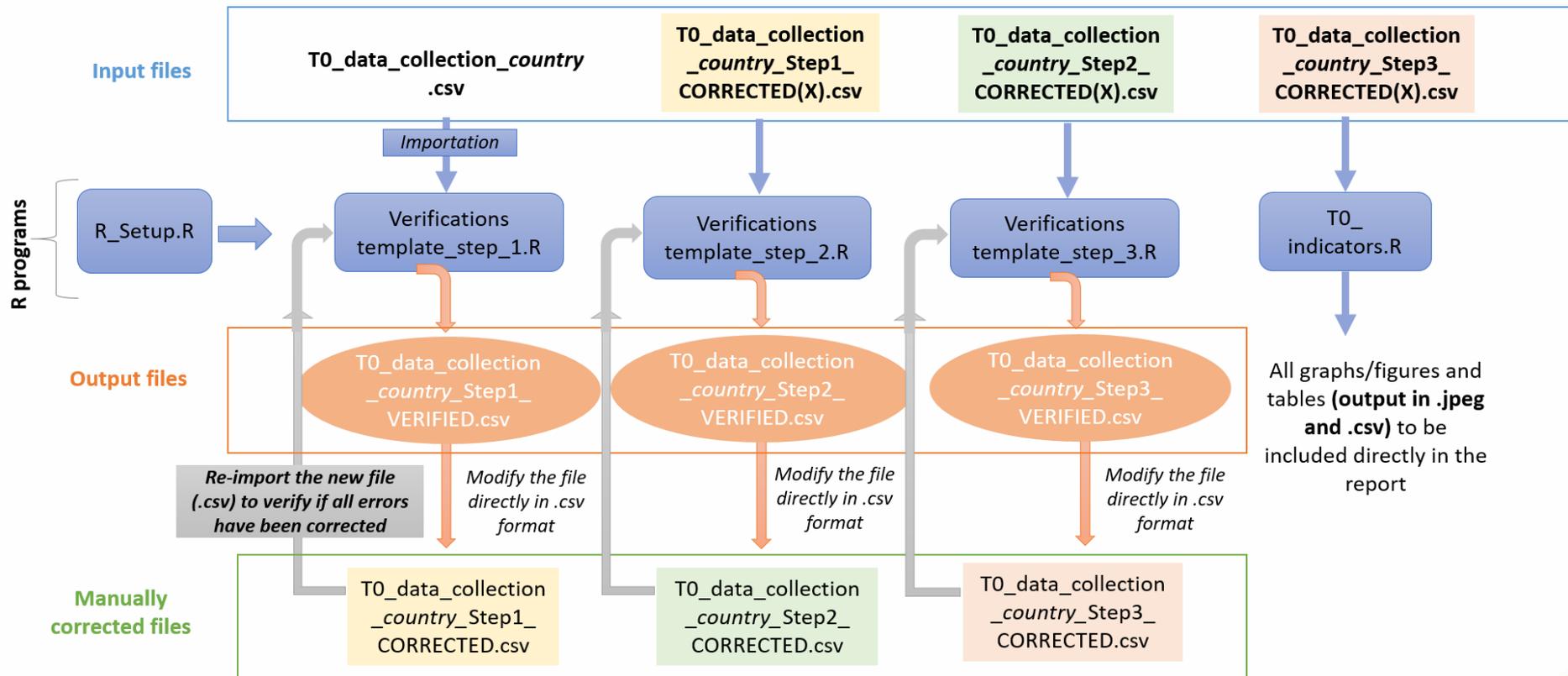
iii. 3rd verification program : 'Verifications template_step_3' ([page 136](#))

C. Part 3 : Indicators and statistics production program ([page 160](#))





Description of the different 'R' programs



→ All the R programs are already prepared and written, you will just need to make some minor parameter changes and run them.

→ The verification part with 3 programs is the longest but this part is essential to ensure the reliability of the indicators that will come out of the last program '`TO_indicators`'.



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

Folder you had to copy on your desktop

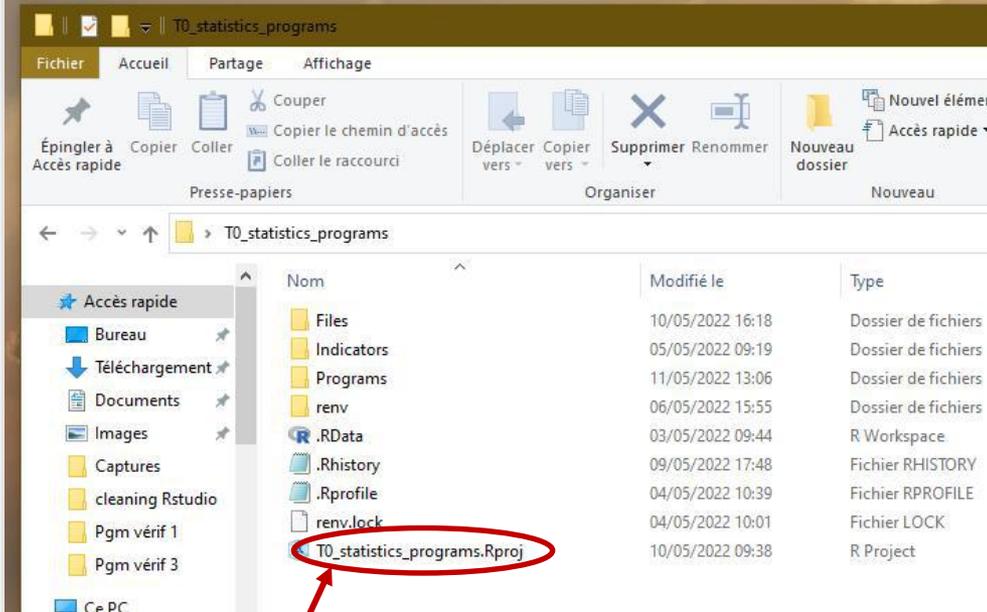


!Important information!

To run all the programs in this 5.3.2 task, you will not need to use the Rstudio software installed directly on your computer.

You will need to go to the **'TO_statistics_programs'** folder previously saved on your desktop and select the project called **TO_statistics_programs.Rproj**

Clicking on it will open an interface to Rstudio created specifically for the T0 statistics task. It is very important that you run all your programs on this Rstudio interface.



Rstudio interface created specifically for the project that you always have to work with





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

!Important information!

After opening the Rstudio interface named '*T0_statistics_programs.Rproj*', you can check each time that you are in the correct working interface by checking that it says at the top left **"T0_statistics_programs – Rstudio"**





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

R version used by the Rstudio interface

You should also ensure that the **'TO_statistics_programs - Rstudio'** project is working with **version 4.1.2** of R software by looking in the Rstudio console.

If the yellow highlighted message indicates a version of R other than 4.1.2, then you will need to perform the procedure **described in the following slides**.

If the yellow highlighted message indicates “**R version 4.1.2**”, then you can go directly to [page 71](#).

Size	Modified
125.9 KB	May 3,
29.5 KB	May 8,
25 B	May 4,
36.4 KB	May 4,
218 B	May 8,





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

The screenshot shows the RStudio interface with the **Tools** menu open. The **Global Options...** option is highlighted. A callout box contains the text: **R version used by the Rstudio interface**
Go to the **Tools** tab and select **Global Options**

The console window displays the following text:

```
R 4.1.2 · C:/Users/t.laguillon/Desktop/T0_statistics_programs/
R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

* Project 'c:/Users/t.laguillon/Desktop/T0_statistics_programs'
[workspace loaded from c:/Users/t.laguillon/Desktop/T0_statistics_programs]
```

The file explorer window shows the following files and folders:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022
.Rhistory	23.6 KB	May 17, 2022
.Rprofile	25 B	May 4, 2022
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022
T0_statistics_programs.Rproj	218 B	May 17, 2022





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

The screenshot shows the RStudio interface with the Options dialog box open. The 'General' tab is selected, and the 'R Sessions' section is visible. The 'R version:' field is set to '[Default] [64-bit] C:\Program Files\R\R-4.1.2', and the 'Change...' button next to it is circled in red. The 'Console' pane on the left shows the R version information: 'R version 4.1.2 (2021-11-01) -- "Bird Hippie" Copyright (C) 2021 The R Foundation for Statistical Computing Platform: x86_64-w64-mingw32/x64 (64-bit)'. The 'Environment' pane on the right shows 'Environment is empty'. The 'Plots' pane at the bottom shows a file explorer view of the project directory.

R version used by the Rstudio interface

In the **General** section, click on **Change** next to the R version.





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistics
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

* Project 'c:/Users/t.laguitton/Desktop/T0_statistics_programs':
[workspace loaded from c:/Users/t.laguitton/Desktop/T0_statistics_programs]

Options

General

R Sessions

Choose R Installation

RStudio requires an existing installation of R in order to work. Please select the version of R to use.

Use your machine's default version of R64 (64-bit)

Use your machine's default version of R (32-bit)

Choose a specific version of R:

- [64-bit] C:\Program Files\R\R-4.1.2
- [32-bit] C:\Program Files\R\R-4.1.2
- [64-bit] C:\PROGRA~1\R\R-41~1.2
- [32-bit] C:\PROGRA~1\R\R-41~1.2

Rendering Engine: Auto-detect (recommended)

OK Cancel

Environment is empty

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022
.Rhistory	23.6 KB	May 17, 2022
.Rprofile	25 B	May 4, 2022
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022
T0_statistics_programs.Rproj	218 B	May 17, 2022

R version used by the Rstudio interface

Click on '**Choose a specific version of R:**' and select the **version of R 4.1.2 [64-bit]** present on your computer and then press **OK**.

(If you have any doubts about which version of R to choose at this point there are several 4.1.2 versions on offer, please feel free to send us a screenshot of the proposals made and we will help you choose)



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use

The screenshot shows the RStudio interface with the 'Options' dialog box open to the 'R Sessions' tab. The 'R version' field is set to '[Default] [64-bit] C:\Program Files\R\R-4.1.2'. A message box titled 'Rendering Engine Changed' is displayed in the foreground, stating 'The desktop rendering engine has been changed. Please restart RStudio for these changes to take effect.' The 'OK' button in the message box is circled in red. The background shows the RStudio console with the R version 4.1.2 output and the file explorer showing the project files.

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022
.Rhistory	23.6 KB	May 17, 2022
.Rprofile	25 B	May 4, 2022
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022
T0_statistics_programs.Rproj	218 B	May 17, 2022

R version used by the Rstudio interface

Rstudio will inform you that you need to restart Rstudio for the version change to take effect.

You can click **OK**, close Rstudio and reopen it (opening the '**T0_statistics_programs.Rproj**' project as always).

Version 4.1.2 will be now displayed in the console and you will be able to proceed to the next steps described in the following slides.



3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template_step_1'

ii. 2nd verification program : 'Verifications template_step_2'

iii. 3rd verification program : 'Verifications template_step_3'

C. Part 3 : Indicators and statistics production program





'R_setup' program

Presentation of the 'R_setup' program :

Just after installing the R and R studio software and before starting the verification programs, you will need to run the 'R_setup' program just once. This will allow the installation of packages that contain functions that will be needed for data verification and the creation of indicators.

Requirements before starting the program 'R_setup' :

- Before running the 'R_setup' program, you must ensure that you have **downloaded** the **R** and **Rstudio** software.
- You must also ensure that you are working on the Rstudio interface called ***TO_statistics_programs.Rproj*** located in the 'TO_statistics_programs' folder on your desktop (see 2nd preliminary step [pages 30-31](#))





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R_setup' program

The screenshot shows the RStudio interface with the 'File' menu open. The 'Open File...' option is highlighted. The console displays the following text:

```
source("T0_statistics_programs/.RData")
[1] "T0_statistics_programs"
Warning message:
In loadNamespace("T0_statistics_programs") :
  'T0_statistics_programs' loaded. [renv 0.15.4]
Warning message:
In loadNamespace("T0_statistics_programs/.RData") :
  'T0_statistics_programs/.RData' loaded. [renv 0.15.4]
```

The Environment pane shows 'Global Environment' and 'Environment is empty'. The Files pane shows the directory structure of the project:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2020
.Rhistory	29.5 KB	May 8, 2020
.Rprofile	25 B	May 4, 2020
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2020
T0_statistics_programs.Rproj	218 B	May 8, 2020

How to open the 'R_setup' program





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R_setup' program

The screenshot shows the RStudio interface with the 'Open File' dialog box open. The dialog box is set to the path 'Ce PC > Bureau > T0_statistics_programs'. The 'Programs' folder is selected in the file list. The Environment pane on the right shows 'Global Environment' and 'Environment is empty'. A text box overlay reads 'How to open the 'R_setup' program'.

Nom	Modifié le	Type	Taille
Files	06/05/2022 18:08	Dossier de fichiers	
Indicators	05/05/2022 09:19	Dossier de fichiers	
Programs	08/05/2022 16:04	Dossier de fichiers	
renv	06/05/2022 15:55	Dossier de fichiers	
.RData	03/05/2022 09:44	R Workspace	126 Ko
.Rhistory	08/05/2022 17:23	Fichier RHISTORY	30 Ko
.Rprofile	04/05/2022 10:39	Fichier RPROFILE	1 Ko
renv.lock	04/05/2022 10:01	Fichier LOCK	37 Ko
T0_statistics_programs.Rproj	08/05/2022 17:52	R Project	1 Ko

Name	Size	Modifié
..		
.RData	125.9 KB	May 3,
.Rhistory	29.5 KB	May 8,
.Rprofile	25 B	May 4,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4,
T0_statistics_programs.Rproj	218 B	May 8,





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R_setup' program

The screenshot shows the RStudio interface with the 'Open File' dialog box open. The dialog is set to the 'Programs' folder, and the file 'R_setup.R' is selected. The 'Environment' pane on the right shows 'Global Environment' and 'Environment is empty'. A green callout box contains the text 'How to open the 'R_setup' program'.

Nom	Modifié le	Type
.Rhistory	11/05/2022 13:12	Fichier RHISTOR
R_setup.R	04/05/2022 10:55	Fichier R
T0_indicators.R	11/05/2022 13:12	Fichier R
Verifications template_step_1.R	09/05/2022 09:54	Fichier R
Verifications template_step_2.R	09/05/2022 09:54	Fichier R
Verifications template_step_3.R	09/05/2022 09:54	Fichier R

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218 B





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Running the 'R_setup' program

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains the R script `R_setup.R` with the following code:

```
1 ##### SET-UP PROGRAMME
2 #IT IS NECESSARY TO RUN THIS PROGRAM BEFORE USING RSTUDIO FOR THE TASK
3
4 renv::restore(prompt=F)
5 print("Setup successfully completed, you can close the R-setup program tab and proceed to the next program")
6
```
- Environment Panel:** Shows the Global Environment with the message "Environment is empty".
- Files Panel:** Shows the file explorer for the project directory, listing files such as `.RData`, `.Rhistory`, `.Rprofile`, `Files`, `Indicators`, `Programs`, `renv`, `renv.lock`, and `T0_statistics_programs.Rproj`.
- Console:** Shows the R version information and the output of the `print` statement:

```
R 4.1.2 · C:/Users/t.laguitton/Desktop/T0_statistics_programs/
R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (c) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
```

'R_setup' program opened





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R_setup' program

The screenshot shows the RStudio interface with the 'R_setup.R' script open. The script contains the following code:

```
1 ##### SET-UP PROGRAMME
2 #IT IS NECESSARY TO RUN THIS PROGRAM BEFORE USING RSTUDIO FOR THE TASK
3
4 renv::restore(prompt=F)
5 print("setup successfully completed, you can close the R-setup program tab and proceed to the next program")
6
```

The console output shows the R version and platform information:

```
R 4.1.2 · C:/Users/t.laguitton/Desktop/T0_statistics_programs/
R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
```

A green callout box contains the following text:

Select the entire program (Ctrl+A)
and press 'Run' (or Ctrl+Enter)

The program will run entirely.





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R_setup' program

Program running

The 'R_setup' program can take **quite a long time** (a few seconds to a few minutes) to run because it installs packages in the R software.

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'TO_statistics_programs – Rstudio' window or the program will stop running.

```
1 ##### SET-UP PROGRAM
2 #IT IS NECESSARY TO
3
4 renv::restore(prompt
5 print("setup succes
6
```

R 4.1.2 · C:/Users/t.laguitton/Desktop/ccccc/

- OK [downloaded 1.5 Mb in 0.9 secs]
- Retrieving 'https://cloud.r-project.org/bin/windows/contrib/4.1/scales_1.2.0.zip' ...
- OK [downloaded 601.3 kb in 0.7 secs]
- Retrieving 'https://cloud.r-project.org/bin/windows/contrib/4.1/haven_2.5.0.zip' ...
- OK [downloaded 1.3 Mb in 1 secs]
- Retrieving 'https://cloud.r-project.org/bin/windows/contrib/4.1/knitr_1.39.zip' ...

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
TO_statistics_programs.Rproj	218 B





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Running the 'R_setup' program

```
##### SET-UP PROGRAMME
#IT IS NECESSARY TO RUN THIS PROGRAM BEFORE USING RSTUDIO FOR THE TASK
3
4 renv::restore(prompt=F)
5 print("setup successfully completed, you can close the R-setup program tab and proceed to the next pro
6
```

End of 'R_setup' execution

At the end of the 'R_setup' program execution, you should see the sentence highlighted in yellow in the console.

This means that the program has run correctly and the packages have been **installed successfully**.

You can now close the tab with the 'R_setup' program script, clean up the console and move on to the next program (see next pages).





'R_setup' program

Tutorial video to run the Rsetup program

→ *This video is available at any time on the Best ReMaP intranet in the WP5 section*
https://portal.nijz.si/ssf/a/c/p_name/ssf_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74766/novl_url/1





3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template_step_1' ([page 83](#))

ii. 2nd verification program : 'Verifications template_step_2' ([page 112](#))

iii. 3rd verification program : 'Verifications template_step_3' ([page 136](#))

C. Part 3 : Indicators and statistics production program





Verification programs

- In this part, you will run 3 verification programs on your file : `T0_data_collection_country.csv`
- This part is very important because it will check that there are no input errors in the template and that the data can be used for creating indicators.

You will need to run these programs in the following order:

- 1) `Verifications template_step_1.R`
 - 2) `Verifications template_step_2.R`
 - 3) `Verifications template_step_3.R`
- The only information that verification programs cannot check is the **accuracy** of the **Best-ReMaP category and subcategory classification** of the collected products. We therefore suggest that you carefully check the classification of your products collected before starting the verification programs.





3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template_step_1'

ii. 2nd verification program : 'Verifications template_step_2'

iii. 3rd verification program : 'Verifications template_step_3'

C. Part 3 : Indicators and statistics production program





1st verification program : 'Verifications template_step_1'

Presentation of the 'Verifications template step 1' program :

- This is the first out of the 3 programs of verification of the data entered in your template.
- In this program, data entry problems are checked (misspelling of information, missing mandatory fields, ...)

Requirements before starting the program 'Verifications template step 1' :

- Before running the program, you need to make sure that a **copy** of your T0 collection template is saved in .csv format in the folder '**Files**' in the '**T0_statistics_programs**' folder that you have saved on your desktop.
- You need to make sure that your template have been renamed :
[T0_data_collection_country.csv](#) (with the name of your own country)
- You need to make sure that the barcodes in your file [T0_data_collection_country.csv](#) appear in full and not in scientific format (see procedure [pages 24→28](#))

Your Rstudio interface must have been cleaned up before running the program.

All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

The screenshot shows the RStudio interface with the 'File' menu open. The 'Open File...' option is highlighted. In the background, a file explorer window shows the contents of the 'T0_statistics_programs' folder, including files like '.RData', '.Rhistory', '.Rprofile', 'Files', 'Indicators', 'Programs', 'renv', 'renv.lock', and 'T0_statistics_programs.Rproj'. A text box in the center of the screenshot reads: 'How to open the 'Verifications template_step_1' program'.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

The screenshot shows the RStudio interface. On the left, an 'Open File' dialog box is open, displaying the file explorer for the directory 'Ce PC > Bureau > T0_statistics_programs'. The file list includes folders like 'Files', 'Indicators', 'Programs', and 'renv', and files like '.RData', '.Rhistory', '.Rprofile', 'renv.lock', and 'T0_statistics_programs.Rproj'. The 'T0_statistics_programs.Rproj' file is selected. On the right, the R Environment pane shows 'Environment is empty'. Below it, a file explorer window displays the contents of the 'T0_statistics_programs' directory, listing files such as '.RData', '.Rhistory', '.Rprofile', 'Files', 'Indicators', 'Programs', 'renv', 'renv.lock', and 'T0_statistics_programs.Rproj'.

How to open the 'Verifications template_step_1' program



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

The screenshot shows the RStudio interface. The 'Open File' dialog box is open, displaying the file explorer for the path 'Bureau > T0_statistics_programs > Programs'. The file 'Verifications template_step_1.R' is selected. The 'Environment' pane on the right shows 'Environment is empty'. A text box with a green border contains the text: 'How to open the 'Verifications template_step_1' program'.

Nom	Modifié le	Type
.Rhistory	11/05/2022 13:12	Fichier RHISTOR
R_setup.R	04/05/2022 10:55	Fichier R
T0_indicators.R	11/05/2022 13:12	Fichier R
Verifications template_step_1.R	09/05/2022 09:54	Fichier R
Verifications template_step_2.R	09/05/2022 09:54	Fichier R
Verifications template_step_3.R	09/05/2022 09:54	Fichier R

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

The screenshot displays the RStudio interface. The main editor window shows the R script 'Verifications template_step_1.R' with the following content:

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
5 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3.1
10
11 #Load the necessary packages each time you open Rstudio for running the program with the funct
12 library("dplyr")
13 library("tidyverse")
14
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameters
18
19 ##Input file (csv) name :
20 #Indicate ("T0_data_collection_France.csv") - here you need to replace "France" by the name of your own c
21 input_file="T0_data_collection_France.csv"
22
23 ##verification file (csv) name :
24 ##The csv file should be saved in the same folder as the one containing your data set in csv
25 verification_file="wp5_verification_file.csv"
26
27 ##Output file (csv) name :
28 output_file="T0_data_collection_France_Step1_VERIFIED.csv"
29
30 ##Indicate the separator used for saving your Excel file in csv ("," or ";")
31 separator=";"
32
33 ##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
34 special_alphabet="NO"
35
36 #####
37
```

The Environment pane on the right shows 'Global Environment' and 'Environment is empty'. A file explorer window is open, showing the directory 'C:\Users\t.laguitton\Desktop\T0_statistics_programs' with the following files and folders:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022,
.Rhistory	23.6 KB	May 18, 202;
.Rprofile	25 B	May 4, 2022,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022,
T0_statistics_programs.Rproj	218 B	May 18, 202;

A green callout box with the text 'Verifications template_step_1' program opened' is overlaid on the RStudio interface.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

```
T0_statistics_programs - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Verifications template_step_1.R*
Source on Save
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it
5 ##IMPORTANT : R software must be installed on your computer in order
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3.1
10
11 #Load the necessary packages each time you open Rstudio for running t
12 library("dplyr")
13 library("tidyverse")
14
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameter
18
19 ##Input file (csv) name :
20 #Indicate ("T0_data_collection_France.csv") - here you need to replac
21 input_file="T0_data_collection_France.csv"
22
23 ##Verification file (csv) name :
24 ##The csv file should be saved in the same folder as the one containi
25 verification_file="wp5_verification_file.csv"
26
27 ##Output file (csv) name :
28 output_file="T0_data_collection_France_Step1_VERIFIED.csv"
29
30 ##Indicate the separator used for saving your Excel file in csv (",",
31 separator=";"
32
33 ##If you have used a specific alphabet (greek, etc) in your template,
34 special_alphabet="NO"
35
36
37
29:1 (Top Level)
Console
```

Beginning of each verification program

At the beginning of each verification program, there is a set parameters part (line 16). It is only in this part that you should change information.

In the first run of the verification program 1, you need to change the name of the country with your own country name in the input file (line 21) and the output file (line 28) of the R script.

You also need to indicate the separator used in your csv file (line 31). You have the choice only between ";" and ",". In Europe, the most commonly used separator in the csv format is the ";" (pre-filled in the program).

You also need to indicate if you have used a specific alphabet in your template (line 34). This field only concerns countries with a specific alphabet and is therefore pre-filled as "NO".

Example :

- **input file =**
"T0_data_collection_Poland.csv"
- **output file =** "T0_data_collection_Poland_Step1_VERIFIED.csv"
- **Separator =** ";"
- **Special_alphabet =** "NO"





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

The screenshot shows the RStudio interface with the following components:

- Editor:** Displays the R script 'Verifications template_step_1.R'. The code includes comments and function calls for loading packages and setting parameters.
- Environment:** Shows the 'Global Environment' with 'Environment is empty'.
- Files:** Shows the file explorer for the project directory 'T0_statistics_programs', listing files like '.RData', '.Rhistory', and 'T0_statistics_programs.Rproj'.

Code in the Editor:

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
5 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3.1
10
11 #Load the necessary packages each time you open Rstudio for running the program with
12 library("dplyr")
13 library("tidyverse")
14
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameters
18
19 ##Input file (csv) name :
20 #Indicate ("T0_data_collection_France.csv") - here you need to replace "France" by the name of your own c
21 input_file="T0_data_collection_France.csv"
22
23 ##verification file (csv) name :
24 ##The csv file should be saved in the same folder as the one containing your data set in csv
25 verification_file="wp5_verification_file.csv"
26
27 ##output file (csv) name :
28 output_file="T0_data_collection_France_Step1_VERIFIED.csv"
29
30 ##Indicate the separator used for saving your Excel file in csv ("," or ";")
31 separator=";"
32
33 ##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
34 special_alphabet="NO"
35
36
37
```

Text Box:

Select the entire program (Ctrl+A)
and press 'Run' (or Ctrl+Enter)

The program will run entirely.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

After running the program

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template_step_1' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named `T0_data_collection_country_Step1_VERIFIED.csv` to your "Files" folder in the "T0_statistics_programs" folder.

Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment
1	18	Poland	2021	Soft_drinks	Sugar-swee		
2	23	Poland	2021	Soft_drinks	Plant-basec		
3	41	Poland	2021	Soft_drinks	Sugar-swee		
4	50	Poland	2022	Soft_drinks	Other sport		
5	55	Poland	2021	Soft_Drinks	Sugar-swee		
6	65	Poland	2022	Soft_drinks	Sugar-swee		
7	66	Poland	2022	Soft_drinks	Flavoured s		
8	67	Poland	2022	Soft_drinks	Flavoured v		
9	68	Poland	2022	Soft_drinks	Sugar-swee		
10	76	Poland	2021	Soft_Drinks	Fruit bevera		
11	87	Poland	2021		Colas witho		
12	94	Poland	2022	Soft_drinks	Flavoured v		
13	95	Poland	2022	Soft_drinks	Sugar-swee		
14	97	Poland	2022	Soft_drinks	Sugar-swee		

```
R 4.1.2 · C:/Users/t.laguitton/Desktop/T0_statistics_programs/Files/
> ##utils::write.csv2 uses a comma for the decimal point and a semicolon for t
in some western European locales.
> ##If the Excel convention is different in your country, please use the funct
2.csv",na=" ",sep="|",dec=".",row.names=FALSE)
>
> print("The file should appear in the folder 'Files'")
[1] "The file should appear in the folder 'Files'"
>
```





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_1' program

The screenshot shows a Windows File Explorer window with the following details:

- Address bar: Ce PC > Bureau > T0_statistics_programs > Files
- File list:

Nom	Modifié le	Type
T0_data_collection_France.csv	03/05/2022 14:48	Fichier CSV M
T0_data_collection_France_Step1_CORRECTED.csv	06/05/2022 17:48	Fichier CSV M
T0_data_collection_France_Step1_VERIFIED.csv	06/05/2022 17:48	Fichier CSV M
wp5_verification_file.csv	13/04/2022 08:09	Fichier CSV M

The callout box contains the following text:

Create a copy of the file exported by R

In the 'Files' folder, you will find the file exported by the first verification program `T0_data_collection_country_Step1_VERIFIED.csv`

→ You need to create a copy of this file and rename it “`T0_data_collection_country_Step1_CORRECTED.csv`”

It is on this file that you will make the corrections and modifications indicated





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

Be careful to change the format of the 'Bar_code' column (see procedure [page 24-28](#)) when you are working on the file so that the barcodes appear in full and no information is lost.

Overview of the *T0_data_collection_country_Step1_CORRECTED.csv* file which is a new version of your T0 data collection template in which you will have to make modifications/corrections

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
	category	Brand	Bar_code	Assortme	Brand_na	Brand_ow	Type_of	Legal_nan	Legal_nan	Commerci	Commerci	FOP_label	Nutri_Sco	Ingredi	Net_weig	Net_weig	Numb
1			1,23E+12	No	Alpro		Hard discc	Crunchy c	Fizzy cube	Alpro Hazi	Alpro Mog	Traffic light		Ivóvíz, Cul	1000	L	
2			1,23E+12	No	Alpro										1000	mL	
3			1,23E+12	No	BOMBA!										250	mL	
4			1,23E+12	No	Adelholzener Alp										500	mL	
5			1,23E+12	No	Cappy										1000	mL	
6			1,23E+12	No	Adelholzener Alp										500	mL	
7			1,23E+12	No	Adelholzener Alp										500	mL	
8			1,23E+12	No	Adelholzener Alp										750	mL	
9			1,23E+12	No	Adelholzener Alp										500	mL	
10	68	Poland	2022	Soft_drink	Sugar-sw	1,23E+12	No	Adelholzener Alp							250	mL	
11	76	Poland	2021	Soft_Drink	Fruit beve	1,23E+12	No	Cappy							1250	mL	
12	87	Poland	2021		Colas wit	1,23E+12	No	Coca-Cola The Co							500	mL	
13	94	Poland	2022	Soft_drink	Flavoure	1,23E+12	No	Almdudler							330	mL	
14	95	Poland	2022	Soft_drink	Sugar-sw	1,23E+12	No	Almdudler							500	mL	
15	97	Poland	2022	Soft_drink	Sugar-sw	1,23E+12	No	Alnatura							250	mL	
16	101	Poland	2021	Soft_drink	Flavoure	1,23E+12	No	FÉLEGYHÁZI							1500	mL	
17	106	Poland	2020	Soft_drink	Tea beve	1,23E+12	No	FUZETEA							250	mL	
18	127	Poland	2021	Soft_drink	Sugar-sw	1,23E+12	No	HELL							1000	mL	
19	140	Poland	2021	Soft_drink	Fruit beve	1,23E+12	No	Hey-Ho							200	mL	
20	232	Poland	2022	Soft_drink	Fruit beve	1,23E+12	No	Bebivita		Hard discc	Crunchy c	Fizzy cube	Bebivita K	Bebivita c	Traffic light		Fruchtsaf
21	233	Poland	2022	Soft_drink	Fruit beve	1,23E+12	No	beckers bester		Hard discc	Crunchy c	Fizzy cube	Beckers B	Beckers B	Traffic light		Apfelsaft



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

The screenshot shows an Excel spreadsheet with the following columns: Fibre, Nutrient_Energy_as, Energy_as, Fat_as, co, Saturated, Carbohydr, Sugar_as, Protein_a, Salt_as, cc, Fibre_as, Comment, Category, Subcategory, bar_code_starts_0, and Problems. The 'bar_code_starts_0' column is highlighted in red. A text box in the center of the spreadsheet contains the following text:

Appearance of a
'bar_code_starts_0' column
This column appears at the end of the
table
The use of this column is described on
[page 101](#) in this document



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

The screenshot shows an Excel spreadsheet with the following data table:

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
1	Fibre	Nutrient_Energy_as	Energy_as	Fat_as_co	Saturated	Carbohydri	Sugar_as	Protein_a	Salt_as_cc	Fibre_as	Comment	Category	Subcateg	bar_code_starts_0		Problems	
2		0,3									https://be		9	649		net_weight_unit	
3		0									https://be		9	648			
4		0									https://or		9	663			
5													9	659		nutrient_content_expression_unit	
6											https://be		9	647		category_name	
7													9	647		nutrient_content_expression_unit	
8													9	652		nutrient_content_expression_unit	
9													9	650		nutrient_content_expression_unit	
10													9	657		nutrient_content_expression_unit	
11											https://be		9	95			
12											https://be		9	653		category_name	
13													9	650		nutrient_content_expression_unit	
14													9	664		nutrient_content_expression_unit	
15		0,5											9	658		nutrient_content_expression_unit	
16											https://or		9	644		saturated_fat	
17											https://be		9	656			
18		0									https://be		9	664			
19											https://be		9	645			
20													9	95		nutrient_content_expression_unit	
21		0,1											9	95		salt/nutrient_content_expression unit	

Appearance of a 'Problems' column which lists the fields for which the R program has found errors/inconsistencies

This column appears at the end of the table





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

T0_data_collection_France_Step1_CORRECTED.csv - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... LAGUITTON Thomas Share

Clipboard Font Alignment Number Styles Cells Editing

A12 : 87

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Product_c	Father_pr	Country	Year	Category	Subcateg	Bar_code	Assortme	Brand_na	Brand_ow	Type_of_t	Legal_nan	Legal_nan	Commerci	Commerci	FOP_label	Nutri_Sco	Ingredi	Net_weig	Net_weig	Numb
2	18		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No	Alpro		Hard disc										
3	23		Poland	2021	Soft_drink	Plant-base	1,23E+12	No	Alpro		Hard disc										
4	41		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No	BOMBA!		Hard disc										
5	50		Poland	2022	Soft_drink	Other spo	1,23E+12	No	Adelholzener Alpen		Hard disc										
6	55		Poland	2021	Soft_Drink	Sugar-swe	1,23E+12	No	Cappy		Entry leve										
7	65		Poland	2022	Soft_drink	Sugar-swe	1,23E+12	No	Adelholzener Alpen		Hard disc										
8	66		Poland	2022	Soft_drink	Flavoured	1,23E+12	No	Adelholzener Alpen		Hard disc										
9	67		Poland	2022	Soft_drink	Flavoured	1,23E+12	No	Adelholzener Alpen		Hard disc										
10	68		Poland	2022	Soft_drink	Sugar-swe	1,23E+12	No	Adelholzener Alpen		Hard disc										
11	76		Poland	2021	Soft_Drink	Fruit beve	1,23E+12	No	Cappy		Entry leve										
12	87		Poland	2021	Soft_Drink	Colas with	1,23E+12	No	Coca-Cola The Coca-		Entry leve										
13	94		Poland	2022	Soft_drink	Flavoured	1,23E+12	No	Almdudler		Hard disc										
14	95		Poland	2022	Soft_drink	Sugar-swe	1,23E+12	No	Almdudler		Hard disc										
15	97		Poland	2022	Soft_drink	Sugar-swe	1,23E+12	No	Alnatura		Hard disc										
16	101		Poland	2021	Soft_drink	Flavoured	1,23E+12	No	FÉLEGYHÁZI		Entry leve										
17	106		Poland	2020	Soft_drink	Tea bever	1,23E+12	No	FUZETEA		Entry leve										
18	127		Poland	2021	Soft_drink	Sugar-swe	1,23E+12	No	HELL		Entry leve										
19	140		Poland	2021	Soft_drink	Fruit beve	1,23E+12	No	Hey-Ho		Entry leve										
20	232		Poland	2022	Soft_drink	Fruit beve	1,23E+12	No	Bebivita		Hard disc	Crunchy c	Fizzy cube	Bebivita K	Bebivita c	Traffic light		Fruchtsa		200 mL	
21	233		Poland	2022	Soft_drink	Fruit beve	1,23E+12	No	beckers bester		Hard disc	Crunchy c	Fizzy cube	Beckers B	Beckers B	Traffic light		Apfelsaft		330 mL	

Example of a problem found by the 'Verifications template_step_1' program

Product 87 → the category_name is missing

The R program identifies this missing information as a problem because it is a mandatory field

T0_data_collection_France_Step1

Ready





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

Example of a problem found by the 'Verifications template_step_1' program

Product 87 → the category_name is missing

In the 'Problems' column, it says **category_name** → this means that for this product, there is an inconsistency/error in the 'category_name' field

You will have to correct and fill in the category_name of this product.

AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
Fibre	Nutrient	Energy_as	Energy_as	Fat_as_co	Saturated	Carbohydi	Sugar_as	Protein_a	Salt_as_cc	Fibre_as	Comment	Category	Subcateg	bar_code_starts	0	Problems
	0,3										https://be	9	649			net_weight_unit
	0										https://be	9	648			
	0										https://or	9	663			
													659			nutrient_content_expression_unit
													647			category_name
													647			nutrient_content_expression_unit
													652			nutrient_content_expression_unit
													650			nutrient_content_expression_unit
													657			nutrient_content_expression_unit
													95			
													653			category_name
													650			nutrient_content_expression_unit
													664			nutrient_content_expression_unit
													658			nutrient_content_expression_unit
													644			saturated_fat
													656			
													664			
													645			
													95			nutrient_content_expression_unit
													95			salt / nutrient_content_expression_unit





Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template_step_1' program, their meaning and what to do

- In the following slides all the terms that can appear in the problem column and how to make corrections will be presented.
- Please note that the verification program 'Verifications template_step_1' is **case sensitive** (upper and lower case letters are important). Any information entered that does not match the **spelling** and **case** of the elements in the drop-down lists of the initial data entry template will appear as an error.





Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template_step_1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>	
Duplicate_code	Different products have the same product code	→ You must change the product code so that all products have a unique code	'Product_code' is a mandatory field
Empty_product_code	The product does not have a unique product code	→ You must create a unique product code that does not already exist for the product	
Country	Incorrect country name (i.e. not contained in the closed list of the input template) or missing country name	→ You must check the spelling of the country by comparing it with the closed list of the input template or add the country name if it is missing	'Country' is a mandatory field
Year	Year different from 2021 or 2022 or missing	→ You must correct the collection year (no other choice than 2021 or 2022) or add it if it is missing	'Year' is a mandatory field
Category_name	Incorrect category name (i.e. not contained in the closed list of the input template) or missing category name	→ You must check the spelling of the category name by comparing it with the closed list of the input template or add the category name if it is missing	'Category_name' is a mandatory field
Category_code	Category code that does not exist or missing category code	→ You must check the category code exists by comparing it with the classification guides of the 5 food categories or add the category code if it is missing	'Category_code' is a mandatory field



Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template step 1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>	
Subcategory_name	Incorrect subcategory name (i.e. not contained in the closed list of the input template) or missing subcategory name	→ You must check the spelling of the subcategory name by comparing it with the closed list of the input template or add the subcategory name if it is missing	'Subcategory_name' is a mandatory field
Subcategory_code	Category code that does not exist or missing category code	→ You must check the subcategory code exists by comparing it with the classification guides of the 5 food categories or add the subcategory code if it is missing	'Subcategory_code' is a mandatory field
Bar_code_length_or_empty	The barcode does not have 8, 12, 13, 14, or 15 digits or is missing	→ You must go back to the product pictures and correct the barcode or add the barcode if you have forgotten it. If the barcode does not appear on the product pictures or is the same as in the picture, you must indicate in the 'Comments' field: " <i>barcode checked</i> ".	
Bar_code_chr	The barcode contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the barcode as there can be no characters other than numbers in a barcode	

WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

The screenshot shows an Excel spreadsheet with the following data table:

AT	AU	AV	AW	AX	AY
Comment	Category	Subcategory	bar_code_starts_0	problems	
	9	653			
	9	95			
	9	651			
	9	662			
	1	386			
	1	739		bar_code_length_or_empty	
	1	679			
	1	678			
	1	681			
	1	745	Yes	bar_code_length_or_empty	
	1	680			
	1	386			
	1	745			
	1	138		bar_code_chr	
	5	795			
	5	795			
	5	333			
	5	628			
	5	742			
	5	634			

- If the problem **bar_code_length_or_empty** appears in the 'Problems' column, you need to look at the product pictures to correct the barcode entered.

If you see that the barcode to be corrected **starts with a number "0"**, you must indicate in the column 'bar_code_starts_0' → **"Yes"**

You don't need to enter the 0 at the beginning of the barcode in the 'Bar_code' field as this will be removed by Excel (the csv format doesn't take 0's at the beginning of a number into account) but this important information will be kept thanks to the 'bar_code_starts_0' column.



Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template_step_1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>	
Brand_name	Brand name is missing	→ You must go back to the product pictures and add the brand name of the product if you have forgotten it. If the brand name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>brand name checked and unreadable/not existing</i> ".	
Type_of_brand	Incorrect type of brand (i.e. not contained in the closed list of the input template) or missing type of brand	→ You must check the spelling of the type of brand by comparing it with the closed list of the input template or add the type of brand if it is missing by looking at the product's brand name	'Type_of_brand' is a mandatory field
<ul style="list-style-type: none"> • Legal_name • Legal_name_english 	Legal name is missing Legal name in english is missing	→ You must go back to the product pictures and add the legal name of the product if you have forgotten it. If the legal name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>legal name checked and unreadable/not existing</i> ". → If the legal name in English is missing, you must translate the legal name and add it to the template	



Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template step 1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>	
<ul style="list-style-type: none"> • Commercial_name • Commercial_name_english 	<p>Commercial name is missing</p> <p>Commercial name in english is missing</p>	<p>→ You must go back to the product pictures and add the commercial name of the product if you have forgotten it. If the commercial name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: <i>"commercial name checked and unreadable/not existing"</i>.</p> <p>→ If the commercial name in English is missing, you must translate the commercial name and add it to the template</p>	
FOP_labeling_type	<p>Incorrect FOP labeling type (i.e. not contained in the closed list of the input template) or missing FOP labeling type</p>	<p>→ You must check the spelling of the FOP labeling type by comparing it with the closed list of the input template or add the FOP labeling type if it is missing by looking at the product's pictures. If there is no FOP labeling type of interest on the pictures of the product, you must enter 'None from the list'.</p>	<p>'FOP_labeling_type' is a mandatory field</p>
Nutri_score	<p>Incorrect nutri-score (not a letter between A and E)</p>	<p>→ You must go back to the product pictures and find the correct nutri-score of the product and enter it in the template</p>	



Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template_step_1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Ingredient_list	Ingredient list is missing	→ You must go back to the product pictures and add the ingredient list of the product if you have forgotten it. If the ingredient list does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: <i>"ingredient list checked and unreadable/not existing"</i> .
Net_weight	The net weight contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the net weight as there can be no characters other than numbers in the 'net_weight' field.
Net_weight_unit	The net weight unit is different from « g » or « mL » (i.e. not contained in the closed list of the input template)	→ You must check the spelling of the net weight unit by paying attention to upper and lower case. It should be entered as "g" or "mL".
Number_of_units	The number of units contains characters other than numbers that are unwanted	→ You must correct the number of units as there can be no characters other than numbers in the 'number_of_units' field
Portion_size	The portion size contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the portion size as there can be no characters other than numbers in the 'portion_size' field.



Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Portion_size_unit	The portion size unit is different from « g » or « mL »	→ You must check the spelling of the net weight unit by paying attention to upper and lower case. It must be entered "g" or "mL" and not something else.
Nutrient_content_expression_unit	The nutrient content expression unit is different from « 100g » or « 100mL »	→ You must check the spelling of the nutrient content expression unit. It must be entered « 100g » or « 100mL » and not something else.
<ul style="list-style-type: none"> • Energy_kCal • Energy_kJ • Fat • Saturated_fat • Carbohydrates • Sugar • Protein • Salt • Fibre 	The fields contain characters other than numbers (except "<" and "traces") that are unwanted.	<p>→ You must correct so that only numbers remain and no other characters</p> <p>→ If you have any doubt about the values when correcting, go back to the product photos</p>
Nutrient_content_expression_unit_as_consumed	The nutrient content expression unit for products to be reconstituted is different from « 100g » or « 100mL »	→ You must check the spelling of the nutrient content expression unit as consumed. It must be entered « 100g » or « 100mL » and not something else



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template_step_1' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
<ul style="list-style-type: none">• Energy_as_consumed_kCal• Energy_as_consumed_kJ• Fat_as_consumed• Saturated_fat_as_consumed• Carbohydrates_as_consumed• Sugar_as_consumed• Protein_as_consumed• Salt_as_consumed• Fibre_as_consumed	The fields contain characters other than numbers (except "<" and "traces") that are unwanted	<p>→ You must correct so that only numbers remain and no other characters</p> <p>→ If you have any doubt about the values when correcting, go back to the product photos</p>





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

- Fields that are indicated as mandatory in the previous table and that show a problem when information is missing
→ **You must correct or enter information for these fields.**
- For nutritional values containing the word “traces”, it is also necessary to **check by hand** and **standardize** the spelling of "**traces**" (so you don't have "Traces", "trace", ...)
- For products where a problem appears but the information entered is correct or missing, you must indicate in the '*Comments*' field that the problem has been checked (see the '*Action*' column in the previous tables).
→ **This way, when you will run the verification program again, you will be able to identify problems that appear without being a problem (and have already been verified).**





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_1' program

- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on [pages 24→28](#).**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *TO_data_collection_country_Step1_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template_step_1' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template_step_1' program again.

All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_1' program

```
1 ##### FIRST PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool
5 ###IMPORTANT : R software must be installed on your computer in order to instal
6
7
8 ##dplyr : 1.0.7
9 ##tidyverse : 1.3.1
10
11 #Load the necessary packages each time you open Rstudio for running the program
12 library("dplyr")
13 library("tidyverse")
14
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameters
18
19 ##Input file (csv) name :
20 #Indicate ("T0_data_collection_France.csv") - here you need to replace "France"
21 input_file="T0_data_collection_France.csv"
22
23 ##Verification file (csv) name :
24 ##The csv file should be saved in the same folder as the one containing your da
25 verification_file="wp5_verification_file.csv"
26
27 ##Output file (csv) name :
28 output_file="T0_data_collection_France_Step1_VERIFIED.csv"
29
30 ##Indicate the separator used for saving your Excel file in csv ("," or ";")
31 separator=";"
32
33 ##If you have used a specific alphabet (greek, etc) in your template, please indicate YES
34 special_alphabet="NO"
35
36
37
```

Setting parameters of the second running of 'Verifications template_step_1' program

For this second running of the 'Verifications template_step 1', the only fields you need to change are the names of the input file and the output file.

Input_file =
"T0_data_collection_country_Step1_CORRECTED.csv"

Output_file =
"T0_data_collection_country_Step1_VERIFIED2.csv"

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_1' program

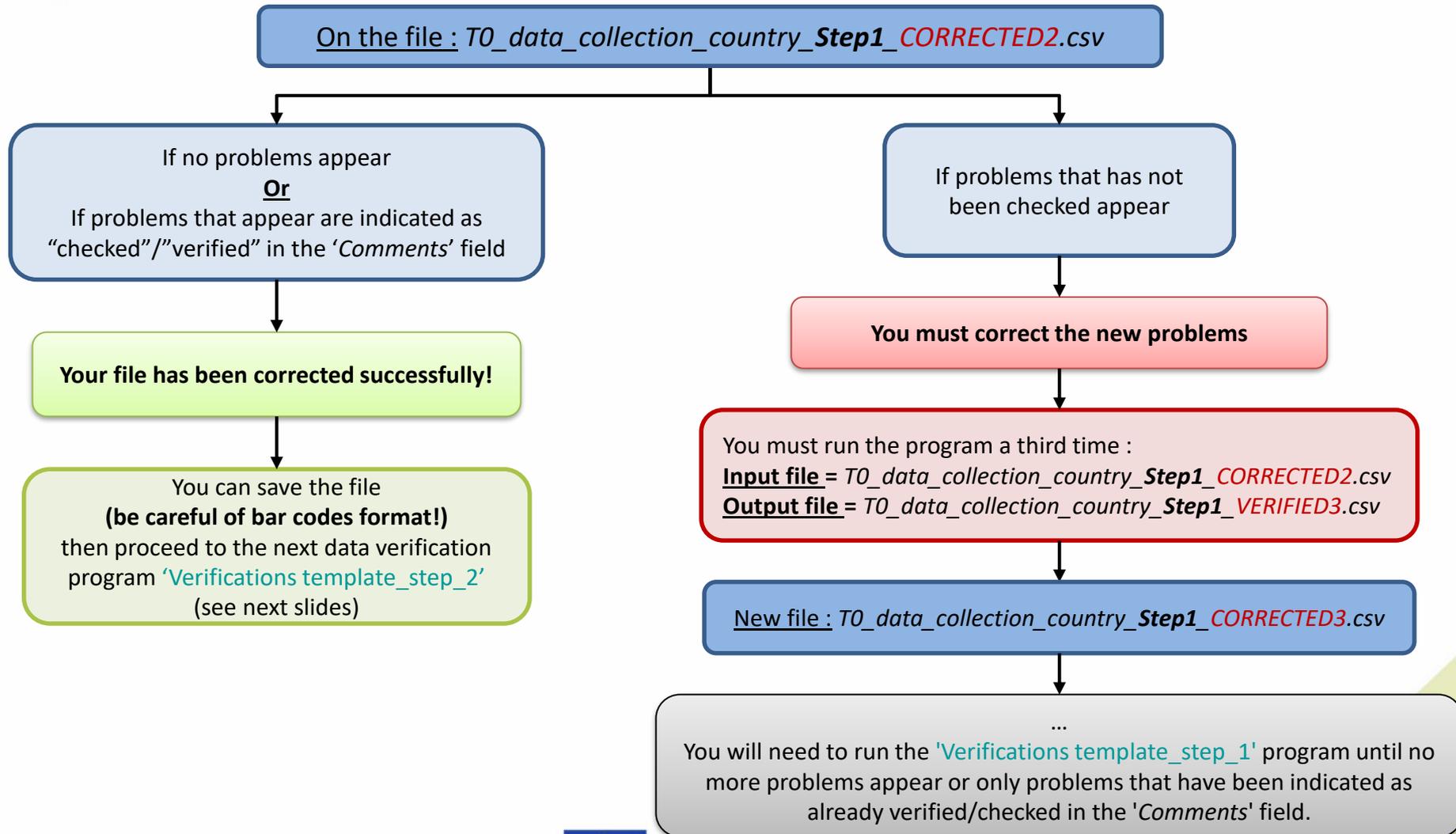
- At the end of this second run, you get in the "**Files**" folder a file called:
"TO_data_collection_country_**Step1**_VERIFIED2.csv"
 - You must create a copy of this file and call it :
"TO_data_collection_country_**Step1**_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_1' program





3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template_step_1'

ii. 2nd verification program : 'Verifications template_step_2'

iii. 3rd verification program : 'Verifications template_step_3'

C. Part 3 : Indicators and statistics production program





2nd verification program : 'Verifications template_step_2'

Presentation of the 'Verifications template step 2' program :

- In this second verification program, consistency problems will be highlighted: consistency of categories and their codes, sub-categories and their codes, values and their units, etc.

Requirements before starting the program 'Verifications template step 2' :

- The program 'Verifications template_step_1' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template_step_1'
- You must have your template in your possession and it must now be called:
TO_data_collection_ **country** _Step1_CORRECTED(X).csv (with the name of your own country)
(X) is the number of the last file exported and corrected after the last run of the first verification program)
- You need to make sure that the barcodes in your file
TO_data_collection_ **country** _Step1_CORRECTED(X).csv appear in full and not in scientific format (see procedure [pages 24→28](#))

Your Rstudio interface must have been cleaned up before running the program.

All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

The screenshot shows the RStudio interface with the 'File' menu open. The 'Open File...' option is highlighted. In the background, a file explorer window is open, showing the contents of the 'T0_statistics_programs' directory. A text box is overlaid on the RStudio window.

How to open the 'Verifications template_step_2' program

Name	Size	Modified
..		
.RData	125.9 KB	May 3,
.Rhistory	31.2 KB	May 9,
.Rprofile	25 B	May 4,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4,
T0_statistics_programs.Rproj	218 B	May 10





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

How to open the 'Verifications template_step_2' program

Nom	Modifié le	Type	Taille
Files	10/05/2022 16:18	Dossier de fichiers	
Indicators	05/05/2022 09:19	Dossier de fichiers	
Programs	11/05/2022 13:06	Dossier de fichiers	
renv	06/05/2022 15:55	Dossier de fichiers	
.RData	03/05/2022 09:44	R Workspace	126 Ko
.Rhistory	09/05/2022 17:48	Fichier RHISTORY	32 Ko
.Rprofile	04/05/2022 10:39	Fichier RPROFILE	1 Ko
renv.lock	04/05/2022 10:01	Fichier LOCK	37 Ko
T0_statistics_programs.Rproj	11/05/2022 15:38	R Project	1 Ko

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218 B





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

The screenshot shows the RStudio interface. The 'Open File' dialog box is open, displaying the file explorer for the 'Programs' folder. The file 'Verifications template_step_2.R' is selected. The 'Environment' pane on the right shows that the environment is empty.

Open File Dialog:

- Path: Bureau > T0_statistics_programs > Programs
- Search: Rechercher dans : Programs
- Files listed:

Nom	Modifié le	Type
.Rhistory	11/05/2022 13:12	Fichier RHISTOR
R_setup.R	04/05/2022 10:55	Fichier R
T0_indicators.R	11/05/2022 13:12	Fichier R
Verifications template_step_1.R	09/05/2022 09:54	Fichier R
Verifications template_step_2.R	09/05/2022 09:54	Fichier R
Verifications template_step_3.R	09/05/2022 09:54	Fichier R

Environment Pane:

- Environment: Global Environment
- Environment is empty

Files Pane:

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218 B

How to open the 'Verifications template_step_2' program



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

The screenshot displays the RStudio interface with the 'Verifications template_step_2.R' script open. The script contains the following code:

```
1 ##### SECOND PROGRAMME OF VERIFICATION
2
3 #Version of R used : 4.1.2
4
5 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
6 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
7
8
9 ##dplyr : 1.0.7
10 ##tidyverse : 1.3.1
11
12 #Load the necessary packages each time you open Rstudio for running the program with the functi
13 library("dplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20
21 ##Input file (csv) name :
22 #Indicate ("T0_data_collection_France_Step1_CORRECTED.csv") - here you need to replace "France" by the na
23 input_file="T0_data_collection_France_Step1_CORRECTED.csv"
24 #The template you will import is the one you have created via verifications template_step_1 ; it should a
25
26 ##Verification file (csv) name :
27 ##The csv file should be saved in the same folder as the one containing your data set in csv - here you r
28 verification_file="wp5_verification_file.csv"
29
```

The console shows the R prompt: `R 4.1.2 · C:/Users/t.laguitton/Desktop/T0_statistics_programs/`

The Environment pane shows: `Environment is empty`

The Files pane shows the directory structure:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022,
.Rhistory	23.6 KB	May 18, 2022,
.Rprofile	25 B	May 4, 2022,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022,
T0_statistics_programs.Rproj	218 B	May 18, 2022,

'Verifications template_step_2' program opened



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

```
T0_statistics_programs - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Verifications template_step_2.R*
Source on Save
8
9 ##dplyr : 1.0.7
10 ##tidyverse : 1.3.1
11
12 #Load the necessary packages each time you open Rstudio for running the
13 library("dplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20
21 ##Input file (csv) name :
22 #Indicate ("T0_data_collection_France_Step1_CORRECTED.csv") - here you ne
23 input_file="T0_data_collection_France_Step1_CORRECTED.csv"
24 #The template you will import is the one you have created via Verificati
25
26 ##Verification file (csv) name :
27 ##The csv file should be saved in the same folder as the one containing y
28 verification_file="wp5_verification_file.csv"
29
30 #Enter the name of your country exactly as entered in the file (respect t
31 #Replace Ireland with your own country (keep the quoting marks)
32 own_country="France"
33
34 #Define the output file name
35 output_file="T0_data_collection_France_Step2_VERIFIED.csv"
36
37 ##Indicate the separator used for saving your Excel file in csv ("," or
38 separator=";"
39
40 ##If you have used a specific alphabet (greek, etc) in your template, ple
41 special_alphabet="NO"
42
43
44
45
46
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48
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57
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100
39:1 (Top Level)
Console
```

Setting parameters of the 2nd verification program

In the first run of the 2nd verification program, you need to change the name of the country with your own country name in the input file (line 23) and the output file (line 35) of the R script + **line 32** ('own_country=')

You must also indicate the separator and if you have a specific alphabet as in the program 'Verifications template_step_1'.

Example :

- **Input_file =**
"T0_data_collection_Poland_Step1_CORRECTED(X).csv"
(X) is the number of the last file exported and corrected after the last run of the first verification program)
- **Own_country = "Poland"** (same spelling as in the country name in the template)
- **Output_file = "T0_data_collection_Poland_Step2_VERIFIED.csv"**
- **Separator = " ; "**
- **Special_alphabet = "NO"**





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

The screenshot displays the RStudio interface with the following components:

- Editor:** Shows the R script 'Verifications template_step_2.R' with the following code:

```
8
9 ##dplyr : 1.0.7
10 ##tidyverse : 1.3.1
11
12 #Load the necessary packages each time you open Rstudio for running the program w
13 library("dplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20
21 ##Input file (csv) name :
22 #Indicate ("T0_data_collection_France_step1_CORRECTED.csv") - here you need to re
23 input_file="T0_data_collection_France_step1_CORRECTED.csv"
24 #The template you will import is the one you have created via Verifications template_step_1 ; it should a
25
26 ##Verification file (csv) name :
27 ##The csv file should be saved in the same folder as the one containing your data set in csv - here you r
28 verification_file="wp5_verification_file.csv"
29
30 #Enter the name of your country exactly as entered in the file (respect the capital letter)
31 #Replace Ireland with your own country (keep the quoting marks)
32 own_country="France"
33
34 #Define the output file name
35 output_file="T0_data_collection_France_step2_VERIFIED.csv"
36
37 ##Indicate the separator used for saving your Excel file in csv ("," or ";")
38 separator=";"
39
40 ##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
41 special_alphabet="NO"
42
43
44
```
- Environment:** Shows the Global Environment with 169 MIB of memory used.
- Files:** A file explorer window shows the project files:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022,
.Rhistory	23.6 KB	May 18, 202:
.Rprofile	25 B	May 4, 2022,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022,
T0_statistics_programs.Rproj	218 B	May 18, 202:

Instructional Callout: Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter). The program will run entirely.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

After running the program

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template_step_2' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named `T0_data_collection_country_Step2_VERIFIED.csv` to your "Files" folder in the "T0_statistics_programs" folder.

Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name
1	18	Poland	2021	Soft_drinks	Sugar-sweetened plant-b
2	23	Poland	2021	Soft_drinks	Plant-based beverages w
3	41	Poland	2021	Soft_drinks	Sugar-sweetened and art
4	50	Poland	2022	Soft_drinks	Other sports drinks
5	55	Poland	2021	Soft_drinks	Sugar-sweetened fruit be
6	65	Poland	2022	Soft_drinks	Sugar-sweetened fruit be
7	66	Poland	2022	Soft_drinks	Flavoured sugar-sweeten
8	67	Poland	2022	Soft_drinks	Flavoured waters without
9	68	Poland	2022	Soft_drinks	Sugar-sweetened and art
10	76	Poland	2021	Soft_drinks	Fruit beverages with fruit
11	87	Poland	2021	Soft_drinks	Colas without added suga
12	94	Poland	2022	Soft_drinks	Flavoured waters without
13	95	Poland	2022	Soft_drinks	Sugar-sweetened energy
14	97	Poland	2022	Soft_drinks	Sugar-sweetened tea bev

```
R 4.1.2 · C:/Users/Elaguiton/Desktop/T0_statistics_programs/Files/ > > > #Export the Step2_T0_data_f > utils::write.csv2(Step2_T0_data_f,file=output_file,na=" ",row.names=FALSE) > print("The file should appear in the folder 'Files'") [1] "The file should appear in the folder 'Files'" > |
```





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_2' program

Create a copy of the file exported by R

In the 'Files' folder, you will find the file exported by the 2nd verification program `T0_data_collection_country_Step2_VERIFIED.csv`

→ You need to create a copy of this file and rename it “`T0_data_collection_country_Step2_CORRECTED.csv`”

It is on this file that you will make the corrections and modifications indicated

Nom	Modifié le	Type	Taille
T0_data_collection_France.csv	03/05/2022 14:48	Fichier CSV Micro...	154 Ko
T0_data_collection_France_Step1_CORRECTED.csv	09/05/2022 10:10	Fichier CSV Micro...	157 Ko
T0_data_collection_France_Step1_VERIFIED.csv	08/05/2022 16:55	Fichier CSV Micro...	176 Ko
T0_data_collection_France_Step2_CORRECTED.csv	09/05/2022 10:11	Fichier CSV Micro...	187 Ko
T0_data_collection_France_Step2_VERIFIED.csv	09/05/2022 10:11	Fichier CSV Micro...	187 Ko
wp5_verification_file.csv	13/04/2022 08:09	Fichier CSV Micro...	16 Ko





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_2' program

T0_data_collection_France_Step2_CORRECTED.csv - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... LAGUITTON Thomas Share

Clipboard Font Alignment Number Styles Cells Editing

Product_code

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Product_code	Father_pr	Country	Year	Category	Subcategory	Bar_code	Assortme	Brand_nar	Brand_ow	Type_of	Legal_nan	Legal_nan	Commerci	Commerci	FOP_label	Nutri_Sco	Ingredi	Net_weig	Net_weig	Numb
2	18		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	Alpro		Hard discc	Crunchy o	Fizzy cube	Alpro Haz	Alpro Mog	Traffic light		Ivóvíz, Cu	1000	mL	
3	23		Poland	2021	Soft drink	Plant-bas	1,23E+12	No	Alpro		Hard discc	Crunchy o	Fizzy cube	Alpro Ori	Noir mou	Traffic light		Viz Biz (1	1000	mL	
4	41		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	BOMBA!										250	mL	
5	50		Poland	2022	Soft drink	Other spo	1,23E+12	No	Adelholzener Alpen	Har									500	mL	
6	55		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	Cappy		Ent								1000	mL	
7	65		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Adelholzener Alpen	Har									500	mL	
8	66		Poland	2022	Soft drink	Flavoured	1,23E+12	No	Adelholzener Alpen	Har									500	mL	
9	67		Poland	2022	Soft drink	Flavoured	1,23E+12	No	Adelholzener Alpen	Har									750	mL	
10	68		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Adelholzener Alpen	Har									500	mL	
11	76		Poland	2021	Soft drink	Fruit beve	1,23E+12	No	Cappy		Ent								250	mL	
12	87		Poland	2021	Soft drink	Colas with	1,23E+12	No	Coca-Cola The Coca-	Ent									1250	mL	
13	94		Poland	2022	Soft drink	Flavoured	1,23E+12	No	Almdudler		Har								500	mL	
14	95		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Almdudler		Har								330	mL	
15	97		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Alnatura		Har								500	mL	
16	101		Poland	2021	Soft drink	Flavoured	1,23E+12	No	FÉLEGYHÁZI		Ent								250	mL	
17	106		Poland	2021	Soft drink	Tea bever	1,23E+12	No	FUZETEA		Ent								1500	mL	
18	127		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	HELL		Ent								250	mL	
19	140		Poland	2021	Soft drink	Fruit beve	1,23E+12	No	Hey-Ho		Ent								1000	mL	
20	232		Poland	2022	Soft drink	Fruit beve	1,23E+12	No	Bebevita		Hard discc	Crunchy o	Fizzy cube	Bebevita K	Bebevita c	Traffic light		Fruchtsaf	200	mL	
21	233		Poland	2022	Soft drink	Fruit beve	1,23E+12	No	beckers bester		Hard discc	Crunchy o	Fizzy cube	Beckers B	Beckers B	Traffic light		Apfelsaft	330	mL	

T0_data_collection_France_Step2

Ready

Overview of the
***T0_data_collection_
country_Step2_CORRECTED.csv***
file which is a new version of
your T0 data collection template
in which you will have to make
modifications/corrections





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_2' program

The screenshot shows an Excel spreadsheet with the following data table:

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX
1	Fibre	Nutrient_Energy_as	Energy_as	Fat_as_co	Saturated	Carbohydr	Sugar_as	Protein_a	Salt_as_cc	Fibre_as	Comment	Category	Subcategory	bar_code_starts_0		Problems
2		0,3											9	649		type_of_brand
3		0											9	648		
4		0											9	663		
5													9	659		type_of_brand
6													9	647		nutritional_values_&_units / type_of_brand
7													9	647		sugar_content
8													9	652		
9													9	650		
10													9	657		
11													9	95		type_of_brand
12													9	653		
13													9	650		
14													9	664		
15		0,5											9	658		
16													9	644	Yes	
17													9	656		
18		0											9	664		type_of_brand
19													9	645		type_of_brand
20													9	95		
21		0,1											9	95		

Appearance of a 'Problems' column which lists the fields for which the R program has found errors/inconsistencies

This column appears at the end of the table





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_2' program

Example of a problem found by the 'Verifications template_step_2' program

Line 106 → the net_weight_unit is missing

In the 'Problems' column, it says **net_weight_&_units** → this means that for this product, there is an inconsistency/error in the 'net_weight_unit' or 'net_weight' fields.

You will have to fill in the net_weight_unit of this product

	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX
1	Protein	Salt	Fibre	Nutrient_Energy_as	Energy_as	Fat_as_co	Saturated	Carbohydr	Sugar_as	Protein_a	Salt_as_cc	Fibre_as	Comment	Category	Subcategory	bar_code_starts_0	Problems	
101	0,1	0,05													9	656		
102	7,8	0,25	3,1												18	288	Yes	
103	10,9	0,03	10,6												1	679		
104	9,4	0,95	7,4												1	143		
105	7,5	0,49	5,3												1	134	type_of_brand	
106	13,5	0,02	10												1	739	net_weight_&_units	
107	9,8	0,48	12,1												1	676		
108	12	0,1	7,8												1	386		
109	10,3	0,05	6,8												1	679		
110	7,															386		
111	14,															795	type_of_brand	
112	2															520		
113	2															795		
114	1															90		
115	1															742		
116																332		
117	2															742		
118	51,6															628		
119	7															632		
120	2															634		





Excel file to modify after 'Verifications template_step_2' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_2' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
nomenclature	Wrong association between 'Category_name', 'Category_code', 'Subcategory_name' and 'Subcategory_code'	→ Check the 4 fields and correct those (or the one) that are not correctly associated
Net_weight_&_units	<ul style="list-style-type: none"> The net weight is filled but there is no associated net weight unit <u>or</u> <ul style="list-style-type: none"> The net weight unit is filled but there is no associated net weight 	→ If there is a value in the 'net_weight' field, you must add the unit « g » or « mL » in the 'net_weight_unit' field → If there is a unit in the field 'net_weight_unit', you must go back to the pictures of the product and add the value of the portion size. If there is no net weight for this product, it must be an input error and you can delete the unit. → When you have any doubts, you must go back to the pictures of the product to be sure of what to enter
Portion_size_&_units	<ul style="list-style-type: none"> The portion size is filled but there is no associated portion size unit <u>or</u> <ul style="list-style-type: none"> The portion size unit is filled but there is no associated portion size 	→ If there is a value in the 'portion_size' field, you must add the unit « g » or « mL » in the 'portion_size_unit' field → If there is a unit in the field 'portion_size_unit', you must go back to the pictures of the product and add the value of the portion size. If there is no portion size for this product, it must be an input error and you can delete the unit. → When you have any doubts, you must go back to the pictures of the product to be sure of what to enter





Excel file to modify after 'Verifications template_step_2' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_2' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Nutritional_values _&_units	<ul style="list-style-type: none"> The nutrient content expression unit is filled but there are no associated nutritional values for the nutrients <p><u>or</u></p> <ul style="list-style-type: none"> There are nutritional values for the nutrients but there is no associated nutrient content expression unit 	<p>→ If there are nutritional values for the nutrients, you must add the unit « 100g » or « 100mL » in the 'nutrient_content_expression_unit' field</p> <p>→ If there is a unit in the field 'nutrient_content_expression_unit', you must go back to the pictures of the product and add the nutritional values of each nutrient. If there is nutritional values for this product, it must be an input error and you can delete the unit.</p> <p>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</p>
Nutritional_values _as_consumed_&_units	<ul style="list-style-type: none"> The nutrient content expression unit for products to be reconstituted is filled but there is no associated nutritional values for the nutrients as consumed <p><u>or</u></p> <ul style="list-style-type: none"> There are nutritional values for the nutrients as consumed but there is no associated nutrient content expression unit for products to be reconstituted 	<p>→ If there are nutritional values as consumed for the nutrients, you must add the unit « 100g » or « 100mL » in the 'nutrient_content_expression_unit_as_consumed' field</p> <p>→ If there is a unit in the field 'nutrient_content_expression_unit_as_consumed', you must go back to the pictures of the product and add the nutritional values as consumed of each nutrient. If there is no nutritional values as consumed for this product, it must be an input error and you can delete the unit.</p> <p>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</p>



Excel file to modify after 'Verifications template_step_2' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_2' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Wrong_country	This is not the name of your country	→ You must enter the name of your own country, making sure that this is the same spelling as the closed list of the input template
Duplicate_bar_code	Same bar code has been found for 2 or more products	<p>→ If the products have the same bar code and are similar (= duplicates = same bar code + same information for all the fields), you must delete one of the products to keep only one.</p> <p>→ If the products have the same bar code but are different, you must check if it is an input error by going back to the pictures of the products.</p> <ul style="list-style-type: none"> • If it is an input error, you must enter the correct bar code. • If the products really have the same bar code, you must keep them in the template and indicate in the 'Comments' field : « bar code checked and same for several different products »
Type_of_brand	The same brand has been associated with several types of brand. (This problem appears for all products of a same brand if they have been associated with different types of brand)	→ You must filter in the Excel file on a brand name that shows the problem « <i>Type_of_brand</i> », then you must select the correct type of brand and apply it to all the products of the same brand name.



Excel file to modify after 'Verifications template_step_2' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_2' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Carbohydrates_or_sugar_content	The sugar content is greater than the carbohydrates content	<ul style="list-style-type: none"> → You must go back to the pictures of the product and look at the sugar and carbohydrates content to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
Carbohydrates_or_sugar_as_consumed_content	The sugar as consumed content is greater than the carbohydrates as consumed content for products to be reconstituted	<ul style="list-style-type: none"> → You must go back to the pictures of the product and look at the sugar and carbohydrates content as consumed to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
Fat_or_saturated_fat_content	The saturated fat content is greater than the fat content	<ul style="list-style-type: none"> → You must go back to the pictures of the product and look at the fat and saturated fat content to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
Fat_or_saturated_fat_as_consumed_content	The saturated fat as consumed content is greater than the fat as consumed content for products to be reconstituted	<ul style="list-style-type: none"> → You must go back to the pictures of the product and look at the fat and saturated fat content as consumed to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product



Excel file to modify after 'Verifications template_step_2' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_2' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Verify_units_g_100g	a unit in “g” appears for a product belonging to the 'Soft drinks' category	<p>→ You must look at all the fields of the product that have units and find the unit “g”. (Net_weight_unit, Portion_size_unit, Nutrient_content_expression_unit, Nutrient_content_expression_unit_as_consumed)</p> <p>→ You must compare with the pictures of the product to check if this is an input error and correct it if necessary.</p> <p>→ It is not necessarily an input error as some milk beverages can have units in g.</p>
Verify_units_mL_100mL	a unit in “mL” appears for a product belonging to a category other than the 'Soft drinks' category	<p>→ You must look at all the fields of the product that have units and find the unit “mL”. (Net_weight_unit, Portion_size_unit, Nutrient_content_expression_unit, Nutrient_content_expression_unit_as_consumed)</p> <p>→ You must compare with the pictures of the product to check if this is an input error and correct it if necessary.</p> <p>→ It is not necessarily an input error as some yoghourts can have units in mL.</p>



Excel file to modify after 'Verifications template_step_2' program

Terms that may appear in the 'Problems' field following the 'Verifications template_step_2' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Action</u>
Enter_Nutri_score	The 'FOP labeling type' field indicates <i>Nutriscore</i> but there is no associated nutri-score in the 'Nutriscore' field	<ul style="list-style-type: none"> → You must go back to the pictures of the product and enter the letter of the nutri-score that appears on the package. → If there is no nutri-score on the picture, you must correct the entry in the field 'FOP_labeling_type' by choosing another FOP labeling type or <i>none of the list</i> (mandatory field)
Remove_Nutri_score	<ul style="list-style-type: none"> • A nutri score is filled in the 'Nutriscore' field but the 'FOP labeling type' does not indicate <i>Nutriscore</i> 	<ul style="list-style-type: none"> → You must go back to the pictures of the product and check if there is a nutri-score on the package <ul style="list-style-type: none"> • If there is a nutri-score on the package, you must indicate <i>Nutriscore</i> in the 'FOP_labeling_type' field and check that the letter of the nutri-score entered is the right one • If there is no nutri-score on the picture, you must delete the letter in the 'Nutriscore' field and choose a FOP labeling type or <i>none of the list</i> in the field 'FOP_labeling_type' (mandatory field)



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_2' program

- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on [pages 24→28](#).**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *TO_data_collection_country_Step2_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template_step_2' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template_step_2' program again.

All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_2' program

```
8
9 ##dplyr : 1.0.7
10 ##tidyverse : 1.3.1
11
12 #Load the necessary packages each time you open Rstudio for running the program
13 library("dplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20
21 ##Input file (csv) name :
22 #Indicate ("T0_data_collection_France_Step1_CORRECTED.csv") - here you need to
23 input_file="T0_data_collection_France_Step1_CORRECTED.csv"
24 #The template you will import is the one you have created via Verifications te
25
26 ##verification file (csv) name :
27 ##The csv file should be saved in the same folder as the one containing your d
28 verification_file="wp5_verification_file.csv"
29
30 #Enter the name of your country exactly as entered in the file (respect the ca
31 #Replace Ireland with your own country (keep the quoting marks)
32 own_country="France"
33
34 #Define the output file name
35 output_file="T0_data_collection_France_Step2_VERIFIED.csv"
36
37 ##Indicate the separator used for saving your Excel file in csv ("," or ";")
38 separator=";"
39
40 ##If you have used a specific alphabet (greek, etc) in your template, please i
41 special_alphabet="NO"
42
43
44
```

Setting parameters of the second running of 'Verifications template_step_2' program

For this second running of the 'Verifications template_step 2', the only fields you need to change are the names of the input file and the output file.

Input_file =
"T0_data_collection_country_Step2_CORRECTED.csv"

Output_file =
"T0_data_collection_country_Step2_VERIFIED2.csv"

Make sure the country name on line 32 is yours and if not, enter it.

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_2' program

- At the end of this second run, you get in your "files" folder a file called:
"T0_data_collection_country_Step2_VERIFIED2.csv"
 - You must create a copy of this file and call it :
"T0_data_collection_country_Step2_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_2' program

On the file : *T0_data_collection_country_Step2_CORRECTED2.csv*

If no problems appear
Or
If problems that appear are indicated as
"checked"/"verified" in the 'Comments' field

Your file has been corrected successfully!

You can save the file
(be careful of bar codes format!)
then proceed to the next data verification
program 'Verifications template_step_3'
(see next slides)

If problems that has not
been checked appear

You must correct the new problems

You must run the program a third time :

Input file = *T0_data_collection_country_Step2_CORRECTED2.csv*
Output file = *T0_data_collection_country_Step2_VERIFIED3.csv*

New file : *T0_data_collection_country_Step2_CORRECTED3.csv*

...

You will need to run the 'Verifications template_step_2' program until no more problems appear or only problems that have been indicated as already verified/checked in the 'Comments' field.





3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template_step_1'

ii. 2nd verification program : 'Verifications template_step_2'

iii. 3rd verification program : 'Verifications template_step_3'

C. Part 3 : Indicators and statistics production program





3rd verification program : 'Verifications template_step_3'

Presentation of the 'Verifications template step 3' program :

- Third verification program : verification of outliers in your nutritional values
 - For each nutrient in each subcategory, the following position indicators will be calculated :
 - 1st quartile (Q1)
 - 3rd quartile (Q3)
 - Interquartile range (IQR=Q3-Q1)
- Nutrient values will be considered outliers if they are below $Q1 - (IQR * 1.5)$ and above $Q3 + (IQR * 1.5)$.





3rd verification program : 'Verifications template_step_3'

Requirements before starting the program 'Verifications template_step_3' :

- The programs 'Verifications template_step_1' and 'Verifications template_step_2' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template_step_2'
- You must have your template in your possession and it must now be called:
TO_data_collection_ **country**_Step2_CORRECTED(X).csv (with the name of your own country)
((X) is the number of the last file exported and corrected after the last run of the first verification program)
- You need to make sure that the barcodes in your file
TO_data_collection_ **country**_Step2_CORRECTED(X).csv appear in full and not in scientific format (see procedure [pages 24→28](#))

Your Rstudio interface must have been cleaned up before running the program.
All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

The screenshot shows the RStudio interface with the 'File' menu open. The 'Open File...' option is highlighted. In the background, a file explorer window is open, showing the contents of the 'T0_statistics_programs' folder on the desktop. The file explorer shows a list of files and folders, including '.RData', '.Rhistory', '.Rprofile', 'Files', 'Indicators', 'Programs', 'renv', 'renv.lock', and 'T0_statistics_programs.Rproj'.

Environment is empty

How to open the 'Verifications template_step_3' program

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2020
.Rhistory	31.2 KB	May 9, 2020
.Rprofile	25 B	May 4, 2020
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2020
T0_statistics_programs.Rproj	218 B	May 10, 2020





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

How to open the 'Verifications template_step_3' program

Nom	Modifié le	Type	Taille
Files	10/05/2022 16:18	Dossier de fichiers	
Indicators	05/05/2022 09:19	Dossier de fichiers	
Programs	11/05/2022 13:06	Dossier de fichiers	
renv	06/05/2022 15:55	Dossier de fichiers	
.RData	03/05/2022 09:44	R Workspace	126 Ko
.Rhistory	09/05/2022 17:48	Fichier RHISTORY	32 Ko
.Rprofile	04/05/2022 10:39	Fichier RPROFILE	1 Ko
renv.lock	04/05/2022 10:01	Fichier LOCK	37 Ko
T0_statistics_programs.Rproj	11/05/2022 15:38	R Project	1 Ko

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218 B





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

The screenshot shows the RStudio interface. The 'Open File' dialog box is open, displaying the contents of the 'Programs' folder. The file 'Verifications template_step_3.R' is selected. The 'Environment' pane on the right shows that the environment is empty.

Open File Dialog:

Nom	Modifié le	Type
.Rhistory	11/05/2022 13:12	Fichier RHISTOR
R_setup.R	04/05/2022 10:55	Fichier R
T0_indicators.R	11/05/2022 13:12	Fichier R
Verifications template_step_1.R	09/05/2022 09:54	Fichier R
Verifications template_step_2.R	09/05/2022 09:54	Fichier R
Verifications template_step_3.R	09/05/2022 09:54	Fichier R

Environment Pane:

Environment is empty

Files Pane:

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218

How to open the 'Verifications template_step_3' program





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

The screenshot displays the RStudio interface with the script 'Verifications template_step_3.R' open. The script contains the following code:

```
1 ##### THIRD PROGRAMME OF VERIFICATION (DISTRIBUTION)
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
5 ##IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7 #Load the necessary packages each time you open Rstudio for running the program with the functions below
8 library("dplyr")
9 library("tidyverse")
10
11
12 #SET PARAMETERS :
13 #You will need to personalize the variables below with your parameters
14
15 ##Input file (csv) name :
16 #Indicate ("T0_data_collection_France_Step2_CORRECTED.csv.csv") - here you need to replace "France" by th
17 input_file="T0_data_collection_France_Step2_CORRECTED.csv"
18 #The template you will import is the one you have created via Verifications template_step_2 ; it should a
19
20
21 ##Output file (csv) name :
22 output_file="T0_data_collection_France_Step3_VERIFIED.csv"
23
24 ##Indicate the separator used for saving your Excel file in csv ("," or ";" )
25 separator=";"
26
27 ##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
28 special_alphabet="NO"
29
30
31 #####
32
```

The Environment pane on the right shows 'Global Environment' and 'Environment is empty'. A green callout box with the text 'Verifications template_step_3' program opened' is overlaid on the Environment pane. The Files pane at the bottom right shows the directory structure of the project, including files like .RData, .Rhistory, .Rprofile, Files, Indicators, Programs, renv, renv.lock, and T0_statistics_programs.Rproj.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

```
1 ##### THIRD PROGRAMME OF VERIFICATION (DISTRIBUTION)
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a
5 ###IMPORTANT : R software must be installed on your computer in order to i
6
7 #Load the necessary packages each time you open Rstudio for running the pr
8 library("dplyr")
9 library("tidyverse")
10
11
12 #SET PARAMETERS :
13 #you will need to personalize the variables below with your parameters
14
15 ##Input file (csv) name :
16 #Indicate ("T0_data_collection_France_Step2_CORRECTED.csv.csv") - here you
17 input_file="T0_data_collection_France_Step2_CORRECTED.csv"
18 #The template you will import is the one you have created via verification
19
20
21 ##Output file (csv) name :
22 output_file="T0_data_collection_France_Step3_VERIFIED.csv"
23
24 ##Indicate the separator used for saving your Excel file in csv ("," or ";"
25 separator=";"
26
27 ##If you have used a specific alphabet (greek, etc) in your template, plea
28 special_alphabet="NO"
29
30
31 #####
32
```

Setting parameters of the 3rd verification program

In the first run of the 3rd verification program, you need to change the name of the country with your own country name in the input file (line 17) and the output file (line 22)

You must also indicate the separator and if you have a specific alphabet as in the program 'Verifications template_step_1' and 'Verifications template_step_2'.

Example :

- **Input_file** = "T0_data_collection_Poland_Step2_CORRECTED(X).csv"
(X) is the number of the last file exported and corrected after the last run of the second verification program)
- **Output_file** = "T0_data_collection_Poland_Step3_VERIFIED.csv"
- **Separator** = ";"
- **Special_alphabet** = "NO"





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

**Select the entire program (Ctrl+A)
and press 'Run' (or Ctrl+Enter)**

The program will run entirely.

```
##### THIRD PROGRAMME OF VERIFICATION (DISTRIBUTION)
#Version of R used : 4.1.2
#Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
###IMPORTANT : R software must be installed on your computer in order to install,
#Load the necessary packages each time you open Rstudio for running the program w
library("dplyr")
library("tidyverse")
#SET PARAMETERS :
#You will need to personalize the variables below with your parameters
##Input file (csv) name :
#Indicate ("T0_data_collection_France_Step2_CORRECTED.csv.csv") - here you need to
input_file="T0_data_collection_France_Step2_CORRECTED.csv"
#The template you will import is the one you have created via Verifications template_step_2 ; it should a
##Output file (csv) name :
output_file="T0_data_collection_France_Step3_VERIFIED.csv"
##Indicate the separator used for saving your Excel file in csv ("," or ";")
separator=";"
##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
special_alphabet="No"
#####
```

R 4.1.2 · C:/Users/t.laguillon/Desktop/T0_statistics_programs/

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022,
.Rhistory	23.6 KB	May 18, 2022,
.Rprofile	25 B	May 4, 2022,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022,
T0_statistics_programs.Rproj	218 B	May 18, 2022,





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

Program running

The 'Verifications template_step_3' program can take **quite a long time** (a few seconds to a few minutes) to run

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'TO_statistics_programs – Rstudio' window or the program will stop running.

Subcategory_name_VN
1 Sugar-sweetened plant-based b
2 Sugar-sweetened plant-based b
3 Sugar-sweetened plant-based b
4 Sugar-sweetened plant-based b
5 Sugar-sweetened plant-based b
6 Sugar-sweetened plant-based b
7 Sugar-sweetened plant-based b
8 Sugar-sweetened plant-based b
9 Sugar-sweetened plant-based b
10 Sugar-sweetened plant-based b
11 Sugar-sweetened plant-based b
12 Sugar-sweetened plant-based b
13 Sugar-sweetened plant-based b
14 Sugar-sweetened plant-based b
15 Sugar-sweetened plant-based b

```
R 4.1.2 · C:/Users/tilaguitton/Desktop/TO_statistics_programs/Files/  
+ pb_outliers<-base::append(pb_outliers," ") #If TRUE is indicated, nothing is added to the list pb_outliers  
+ }  
+ pb_outliers<-base::paste(pb_outliers,sep=" ", collapse=" ") #concatenate all the information from the pb_outliers list  
+ Step3_T0_data[i,"Problems_outlier"]<-pb_outliers #add this concatenated information in the right column/line from your st  
ep3_T0_data table  
+ }  
+ }
```





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

After running the program

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template_step_3' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named `T0_data_collection_country_Step3_VERIFIED.csv` to your "Files" folder in the "T0_statistics_programs" folder.

Subcategory_name_VN	Q1	Q3	IQR	IQRx1_5	lim_inf	lim_sup
1 Sugar-sweetened plant-based beverages/Energy_kJ_num	NA	NA	NA	NA	NA	NA
2 Sugar-sweetened plant-based beverages/Energy_kCal_num	29.0000	29.0000	0.0000	0.00000	29.00000	29.00000
3 Sugar-sweetened plant-based beverages/Fat_num	1.6000	1.6000	0.0000	0.00000	1.60000	1.60000
4 Sugar-sweetened plant-based beverages/Saturated_fat_num	0.2000	0.2000	0.0000	0.00000	0.20000	0.20000
5 Sugar-sweetened plant-based beverages/Carbohydrates_num	3.1000	3.1000	0.0000	0.00000	3.10000	3.10000
6 Sugar-sweetened plant-based beverages/Sugar_num	3.1000	3.1000	0.0000	0.00000	3.10000	3.10000
7 Sugar-sweetened plant-based beverages/Protein_num	0.4000	0.4000	0.0000	0.00000	0.40000	0.40000
8 Sugar-sweetened plant-based beverages/Salt_num	0.1300	0.1300	0.0000	0.00000	0.13000	0.13000
9 Sugar-sweetened plant-based beverages/Fibre_num	0.3000	0.3000	0.0000	0.00000	0.30000	0.30000
10 Sugar-sweetened plant-based beverages/Energy_as_consumed...	NA	NA	NA	NA	NA	NA
11 Sugar-sweetened plant-based beverages/Energy_as_consumed...	NA	NA	NA	NA	NA	NA
12 Sugar-sweetened plant-based beverages/Fat_as_consumed...	NA	NA	NA	NA	NA	NA
13 Sugar-sweetened plant-based beverages/Saturated.fat_as_c...	NA	NA	NA	NA	NA	NA
14 Sugar-sweetened plant-based beverages/Carbohydrates_as...	NA	NA	NA	NA	NA	NA
15 Sugar-sweetened plant-based beverages/Sugar_as_consum...	NA	NA	NA	NA	NA	NA

```
R 4.1.2 - C:/Users/t.laguillon/Desktop/T0_statistics_programs/Files/
> step3_T0_data_f$category_name<-base::gsub("-", " ", step3_T0_data_f$category_name)
> #Into csv format
> utils::write.csv2(step3_T0_data_f,file=output_file,na=" ",row.names=FALSE)
> print("The file should appear in the folder 'Files'")
[1] "The file should appear in the folder 'Files'"
>
```





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template_step_3' program

Files

Fichier Accueil Partage Affichage

Épingler à l'accès rapide Copier Coller Couper Copier le chemin d'accès Copier vers Déplacer vers Supprimer Renommer Nouveau dossier Nouveau élément Accès rapide Propriétés Historique Sélectionner tout Aucun

Ce PC > Bureau > T0_statistics_programs > Files

Nom	Modifié le	Type	Taille
T0_data_collection_France.csv	03/05/2022 14:48	Fichier CSV Micro...	154 Ko
T0_data_collection_France_Step1_CORRECTED.csv	09/05/2022 10:10	Fichier CSV Micro...	157 Ko
T0_data_collection_France_Step1_VERIFIED.csv	08/05/2022 16:55	Fichier CSV Micro...	176 Ko
T0_data_collection_France_Step2_CORRECTED.csv	09/05/2022 16:02	Fichier CSV Micro...	169 Ko
T0_data_collection_France_Step2_VERIFIED.csv	09/05/2022 10:11	Fichier CSV Micro...	187 Ko
T0_data_collection_France_Step3_CORRECTED.csv	09/05/2022 16:03	Fichier CSV Micro...	184 Ko
T0_data_collection_France_Step3_VERIFIED.csv	09/05/2022 16:03	Fichier CSV Micro...	184 Ko
wp5_verification_file.csv	13/04/2022 08:09	Fichier CSV Micro...	16 Ko

8 élément(s) 1 élément sélectionné 183 Ko

Create a copy of the file exported by R

In the 'Files' folder, you will find the file exported by the 3rd verification program `T0_data_collection_country_Step3_VERIFIED.csv`

→ You need to create a copy of this file and rename it “`T0_data_collection_country_Step3_CORRECTED.csv`”

It is on this file that you will make the corrections and modifications indicated





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

T0_data_collection_France_Step3_CORRECTED.csv - Excel

LAGUITTON Thomas

Product_code

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Product_code	Father_pr	Country	Year	Category	Subcateg	Bar_code	Assortme	Brand_nai	Brand_ow	Type_of_t	Legal_nan	Legal_nan	Commerci	Commerci	FOP_label	Nutri_Sco	Ingredi	Net_weig	Net_weig	Numb
18		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	Alpro		Hard discc	Crunchy c	Fizzy cube	Alpro Hazi	Alpro Mos	Traffic light		Ivóvíz, Cul	1000	mL	
23		Poland	2021	Soft drink	Plant-base	1,23E+12	No	Alpro		Ha										
41		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	BOMBA!		Ha										
50		Poland	2022	Soft drink	Other spo	1,23E+12	No	Adelholzener Alpen	Ha											
55		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	Cappy		En										
65		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Adelholzener Alpen	Ha											
66		Poland	2022	Soft drink	Flavoured	1,23E+12	No	Adelholzener Alpen	Ha											
67		Poland	2022	Soft drink	Flavoured	1,23E+12	No	Adelholzener Alpen	Ha											
68		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Adelholzener Alpen	Ha											
76		Poland	2021	Soft drink	Fruit beve	1,23E+12	No	Cappy		En										
87		Poland	2021	Soft drink	Colas with	1,23E+12	No	Coca-Cola The Coca	En											
94		Poland	2022	Soft drink	Flavoured	1,23E+12	No	Almdudler		Ha										
95		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Almdudler		Ha										
97		Poland	2022	Soft drink	Sugar-swe	1,23E+12	No	Alnatura		Ha										
101		Poland	2021	Soft drink	Flavoured	1,23E+12	No	FÉLEGYHÁZI		En										
106		Poland	2021	Soft drink	Tea beber	1,23E+12	No	FUZETEA		En										
127		Poland	2021	Soft drink	Sugar-swe	1,23E+12	No	HELL		En										
140		Poland	2021	Soft drink	Fruit beve	1,23E+12	No	Hey-Ho		Entry leve	Crunchy c	Fizzy cube	Hey-Ho Li	Hey-Ho Li	None from the list		Viz, 25% ?	1000	mL	
232		Poland	2022	Soft drink	Fruit beve	1,23E+12	No	Bebivita		Hard discc	Crunchy c	Fizzy cube	Bebivita K	Bebivita c	Traffic light		Fruchtsaf	200	mL	
233		Poland	2022	Soft drink	Fruit beve	1,23E+12	No	beckers bester		Hard discc	Crunchy c	Fizzy cube	Beckers B	Beckers B	Traffic light		Apfelsaft	330	mL	

T0_data_collection_France_Step3

Ready

Overview of the
T0_data_collection_country_Step3_CORRECTED.csv
file which is a new version of your T0 data collection template in which you will have to make modifications/corrections





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

The screenshot shows an Excel spreadsheet with the following data columns: AI (Fibre), AJ (Nutrient), AK (Energy_as), AL (Energy_as), AU (category), AV (Subcategory), AW (bar_code_starts), and AX (Problems_outlier). The 'Problems_outlier' column is highlighted in yellow and contains text such as 'Energy_kCal / Fat / Carbohydrates / Sugar / Prote', 'Fat / Carbohydrates', 'Fat / Saturated_fat / Fibre', and 'Salt'. A text box in the center of the spreadsheet reads: 'Appearance of a 'Problems_outlier' column which lists the fields for which the R program has found outliers. This column appears at the end of the table'.





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

Example of problem found by the 'Verifications template_step_3' program

Line 122 → the column 'Problems_outlier' indicates a problem with outliers for energy in kJ and kCal.

The R program identifies the energy values in kJ and kCal for this product as different/aberrant from the values of other products in the same subcategory.

	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	
1	Protein	Salt	Fibre	Nutrient	Energy_as	Energy_as	Fat_as_co	Saturated	Carbohydi	Sugar_as	Protein_a	Salt_as_cc	Fibre_as	Comment	Category	Subcateg	bar_code_start	Problems_outlier
116		9	1,7												5	332		
117		20	3,1												5	742		
118	51,64	3,9													5	628		Protein
119	70	4													5	632		
120	20	3,8													5	634		
121	3,1	0,08													3	614		Fat / Saturated_fat
122	3	0,													3	719		Energy_kj / Energy_kCal
123	1,1	0,													3	612		
124	14	0,													3	35		
125	15	0,													3	719		
126	15	0,													3	719		
127	2,9	0,													3	709		
128	6,6	0,													3	216		
129	6,7	0,													3	252		
130	10,7	0,													3	708		
131	0,1	0,													9	664		Fat / Protein
132	0	0,													9	658		
133	0	0,													9	653	Yes	
134	0	0,													9	662		
135	0,6	0,													9	99		





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

T0_data_collection_France_Step3_CORRECTED.csv - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... LAGUITTON Thomas Share

Clipboard Font Alignment Number Styles Cells Editing

H118 No

	A	B	C	D	E	F
	Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name
96	376		Poland	2021	Bread products	Other rusks
103	383		Poland	2021	Breakfast cereals	Crunchy fruit muesli
113	393		Poland	2021	Delicatessen meats and similar	Sausages
115	395		Poland	2021	Delicatessen meats and similar	Cooked pork ham and roast (packaged)
118	398		Poland	2022	Delicatessen meats and similar	Dried, smoked or cured pork
121	401		Poland	2022	Fresh dairy products and desserts	Classic sweet yoghurts and fermented milks
122	402		Poland	2022	Fresh dairy products and desserts	Classic sweetened fresh cheeses
131	411		Poland	2022	Soft drinks	Sugar-sweetened energy drinks
136	417		Poland	2022	Soft drinks	Fruit beverages with fruit content > or = 50%
137	418		Poland	2022	Soft drinks	Sugar-sweetened fruit beverages
140	421		Poland	2022	Bread products	Plain white sandwich breads / hamburger / hot dog b
141	422		Poland	2022	Bread products	Pre-packaged breads
142	423		Poland	2022	Bread products	Plain white sandwich breads / hamburger / hot dog b
146	427		Poland	2022	Bread products	Plain white sandwich breads / hamburger / hot dog b
150	431		Poland	2022	Breakfast cereals	Cereals without added sugar
153	434		Poland	2022	Breakfast cereals	Crunchy fruit muesli
171	734		Poland	2021	Breakfast cereals	Sweet cereal flakes

Example of problem found by the 'Verifications template_step_3' program

line 122 → the product belongs to the category 'Fresh dairy products desserts' and the subcategory 'Classic sweetened fresh cheeses'

T0_data_collection_France_Step3

Ready 48 of 240 records found





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

Example of a problem found by the 'Verifications template_step_3' program

Line 122 → the column 'Problems_outlier' indicates a problem with outliers for energy in kJ and kCal.

You must check that the values entered for Energy kJ and Energy kCal are correct or/and that the classification (category and/or subcategory) of the product is correct.

You will then need to correct the Energy_kJ and Energy_kcal values or the category/subcategory for this product (if correction is required)

	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
	Preservat	Nutrient											Energy_a	Energy_a	Fat_as_c	Saturate	Carbohyd	Sugar_as	Protein_	Salt_as_c	Fibre_
	ion_met	_content	Energy_k	Energy_k	Fat	Saturate	Carbohyd	Sugar	Protein	Salt	Fibre	Nutrient_	s_consumed_kJ	s_consumed_kCa	onsumed	d.fat_as_c	consumed	consumed	as_consumed	as_consumed	consumed
1	hod	_expressi	J	Cal		d_fat	rates					med_kJ	l	onsumed	d	d	d	ed	med	consumed	d
116	chilled	100g	508	122	8	3	2	0	9	1,7											
117	chilled	100g	542	129	5	1,5															
118	chilled	100g	1333	317	10,7	3,76	3														
119	chilled	100g	1693	406	8	4															
120	chilled	100g	1755	424	38	15	0														
121	chilled	100g	301	71	1,2	0,8															
122	chilled	100g	275	65	1,4	0,9	10														
123	chilled	100g	82	20	1	0,7	1														
124	chilled	100g	1426	341	19	13	2														
125	chilled	100g	542	128	0,4	0,3															
126	chilled	100g	488	115	0,5	0,1															
127	chilled	100g	350	83	1	0,5	1														
128	chilled	100g	1075,2	256,3	22	20	8														
129	chilled	100g	602	144	6,1	3,6	17														
130	chilled	100g	232	62	0,3	0,2	4														
131	chilled	100mL	209	49	<0,01																
132	chilled	100mL		20	0	0	4														





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

Terms that may appear in the 'Problems outlier' field following the 'Verifications template_step_3' program, their meaning and what to do

<u>Problem</u>	<u>Meaning</u>	<u>Solution</u>
<ul style="list-style-type: none"> • Energy_kCal • Energy_kJ • Fat • Saturated_fat • Carbohydrates • Sugar • Protein • Salt • Fibre • Energy_as_consumed_kCal • Energy_as_consumed_kJ • Fat_as_consumed • Saturated_fat_as_consumed • Carbohydrates_as_consumed • Sugar_as_consumed • Protein_as_consumed • Salt_as_consumed • Fibre_as_consumed 	<ul style="list-style-type: none"> • The nutritional value of the product for this nutrient appears to be an outlier compared to the nutritional value for this nutrient of other products in the same subcategory. 	<p>→ Check the pictures of the product, to be sure that the value entered in the template is the correct one. If not, you must enter the correct value directly in the Excel file in .csv format.</p> <p><u>And/or</u></p> <p>→ Check that the category and subcategory associated to the product are the correct ones (you can help you with the WP5 classification guidelines that have been created for each food category). If not, you must enter the correct information (category name + code and/or subcategory name + code) directly in the Excel file in .csv format.</p> <p><u>Else</u></p> <p>→ Nutritional value and subcategory entered for this product are the correct ones, no correction is needed. You must indicate in the 'Comments' field: <i>"outliers checked"</i>.</p> <p>Be careful! A product can have wrong values + wrong classification, it is important to check both for the product.</p>



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template_step_3' program

- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on [pages 24→28](#).**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *TO_data_collection_country_Step3_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template_step_3' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template_step_2' program again.

All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_3' program

```
##### THIRD PROGRAMME OF VERIFICATION (DISTRIBUTION)
#Version of R used : 4.1.2
#Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
###IMPORTANT : R software must be installed on your computer in order to install
#Load the necessary packages each time you open Rstudio for running the program
library("dplyr")
library("tidyverse")

#SET PARAMETERS :
#You will need to personalize the variables below with your parameters

##Input file (csv) name :
#Indicate ("T0_data_collection_France_Step2_CORRECTED.csv.csv") - here you need to
input_file="T0_data_collection_France_Step2_CORRECTED.csv"
#The template you will import is the one you have created via verifications temp

##Output file (csv) name :
output_file="T0_data_collection_France_Step3_VERIFIED.csv"

##Indicate the separator used for saving your Excel file in csv ("," or ";")
separator=";"

##If you have used a specific alphabet (greek, etc) in your template, please indicate
special_alphabet="NO"

#####
```

Setting parameters of the second running of 'Verifications template_step_3' program

For this second running of the 'Verifications template_step_3', the only fields you need to change are the names of the input file and the output file

Input_file =
"T0_data_collection_country_Step3_CORRECTED.csv"

Output_file =
"T0_data_collection_country_Step3_VERIFIED2.csv"

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_3' program

- At the end of this second run, you get in your "files" folder a file called:
"TO_data_collection_country_**Step3**_VERIFIED2.csv"

- You must create a copy of this file and call it :
"TO_data_collection_country_**Step3**_CORRECTED2.csv"

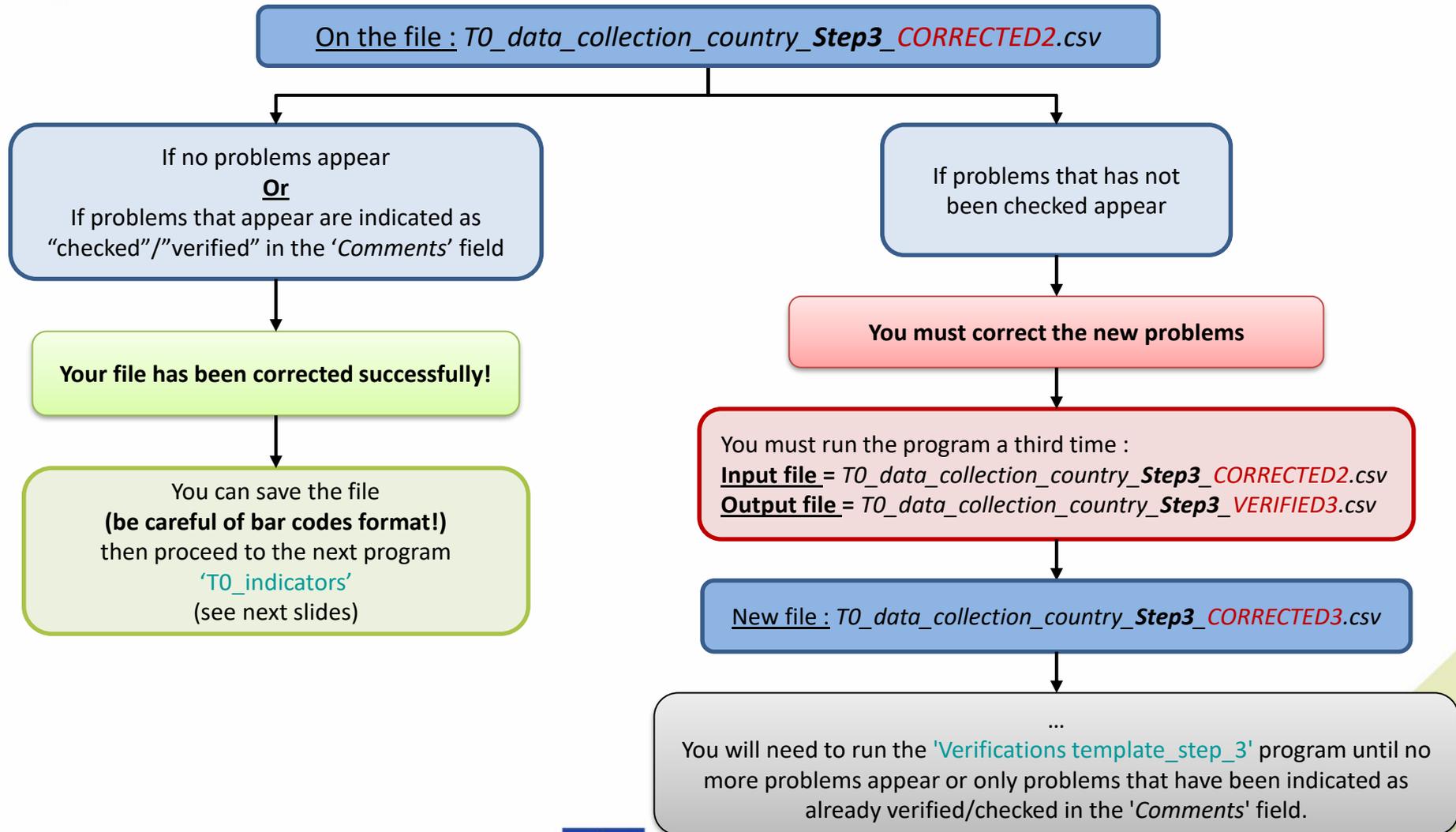
→ It is on this file that you will make the modifications following the checks





WORK Package 5 – Reformulation and processed food monitoring

2nd running of 'Verifications template_step_3' program





End of the 3 verification programs

→ You should now have a file called : *TO_data_collection_country_Step3_CORRECTED(X).csv*
(X) is the number of the last file exported and corrected after the last run of the second verification program)

This file is the final version of your data collection template after you have done all the checks and corrected all the errors.

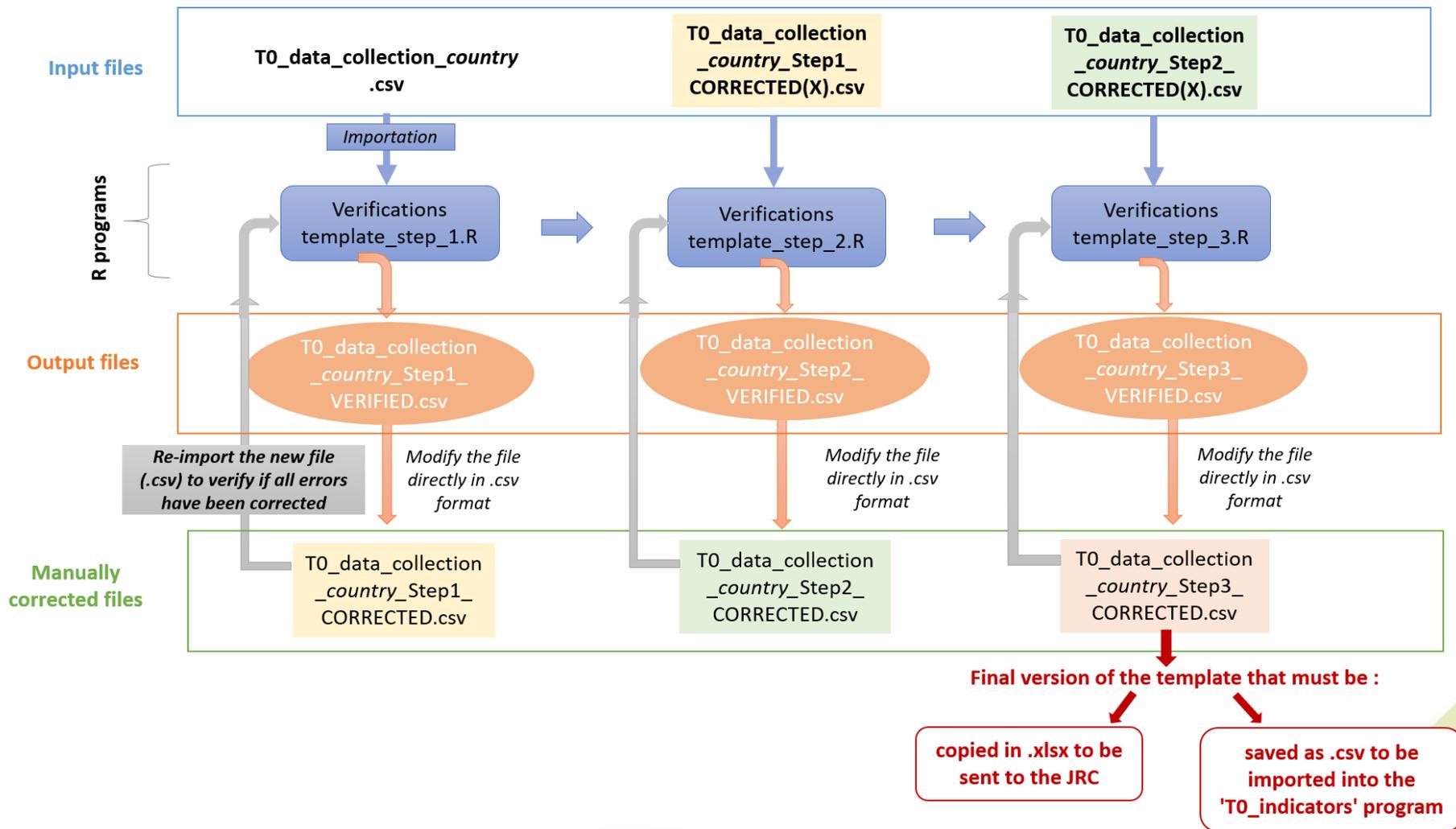
→ You must create a copy of this file and save it in **.xlsx format**
(You can call this file : *TO_data_collection_country_final.xlsx* for example)

This copy in **.xlsx format** will be the final version of your data collection template that will be transmitted to the **JRC**.





Summary of the 3 verification programs





3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template_step_1'

ii. 2nd verification program : 'Verifications template_step_2'

iii. 3rd verification program : 'Verifications template_step_3'

C. Part 3 : Indicators and statistics production program





Production of indicators for data collected during T0

Presentation of the 'T0 indicators' program :

- Thanks to the 'T0_indicators' program, you will be able to output indicators on your data collected during T0 that you will insert in a report you will each write.
(see part [4.Production of the report](#))
- The aim is to produce harmonised indicators, so it is necessary that all partners use the same program and produce similar indicators to be comparable.
- These indicators will be output as .jpeg graphs and .csv tables at the end of the program and should be inserted as such in your report.
- In the program for producing the indicators, the non-quantified values ("traces" and "<") are treated automatically and as in Oqali and JANPA:
 - "traces": replaced by 0,0001
 - "<": the value is divided by 2
Example : < 0,5 → 0,25

Only data collected during T0 will be treated in this section.
Indicators with link to pre-existing data will be seen in a future training with the presence of partners carrying out a T+1 collection.





Production of indicators for data collected during T0

Requirements before starting this section :

- Before starting this part, you should have run the 3 verification programs that were described before and in which you had no more problems to correct (or problems that have been verified and do not need to be changed)
- You should have in your possession your template of data collected during T0 in .csv format which should now be called : *T0_data_collection_country_Step3_CORRECTED(X).csv* ((X) is the number of the last file exported and corrected after the last run of the third verification program)
- You need to make sure that the barcodes in your file *T0_data_collection_country_Step3_CORRECTED(X).csv* appear in full and not in scientific format (see procedure [pages 24→28](#))

Your Rstudio interface must have been cleaned up before running the program.
All cleaning steps are described on [pages 55→61](#).





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

The screenshot shows the RStudio interface with the 'File' menu open. The 'Open File...' option is highlighted. In the background, a file explorer window is open to the 'T0_statistics_programs' folder on the Desktop. The file explorer shows a list of files and folders:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2020
.Rhistory	31.2 KB	May 9, 2020
.Rprofile	25 B	May 4, 2020
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2020
T0_statistics_programs.Rproj	218 B	May 10, 2020

A text box in the center of the screenshot reads: "How to open the 'T0_indicators' program".





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

How to open the 'T0_indicators' program

Nom	Modifié le	Type	Taille
Files	10/05/2022 16:18	Dossier de fichiers	
Indicators	05/05/2022 09:19	Dossier de fichiers	
Programs	11/05/2022 13:06	Dossier de fichiers	
renv	06/05/2022 15:55	Dossier de fichiers	
.RData	03/05/2022 09:44	R Workspace	126 Ko
.Rhistory	09/05/2022 17:48	Fichier RHISTORY	32 Ko
.Rprofile	04/05/2022 10:39	Fichier RPROFILE	1 Ko
renv.lock	04/05/2022 10:01	Fichier LOCK	37 Ko
T0_statistics_programs.Rproj	11/05/2022 15:38	R Project	1 Ko

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218 B





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

The screenshot shows the RStudio interface. The 'Open File' dialog box is open, displaying the file explorer for the 'T0_statistics_programs' directory. The file 'T0_indicators.R' is selected. The 'Environment' pane on the right shows that the environment is empty.

Open File Dialog:

- Path: Bureau > T0_statistics_programs > Programs
- Search: Rechercher dans : Programs
- Files listed:

Nom	Modifié le	Type
.Rhistory	11/05/2022 13:12	Fichier RHISTOR
R_setup.R	04/05/2022 10:55	Fichier R
T0_indicators.R	11/05/2022 13:12	Fichier R
Verifications template_step_1.R	09/05/2022 09:54	Fichier R
Verifications template_step_2.R	09/05/2022 09:54	Fichier R
Verifications template_step_3.R	09/05/2022 09:54	Fichier R
- File name: T0_indicators.R
- File type: All Files (*)

Environment Pane:

- Environment: Global Environment
- Status: Environment is empty

Files Pane:

- Path: Desktop > T0_statistics_programs
- Files listed:

Name	Size
..	
.RData	125.9
.Rhistory	31.2
.Rprofile	25 B
Files	
Indicators	
Programs	
renv	
renv.lock	36.4
T0_statistics_programs.Rproj	218 B

How to open the 'T0_indicators' program



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

The screenshot shows the RStudio interface with the 'T0_indicators.R' script open. The script contains the following code:

```
1 ##### T0 INDICATORS
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
5 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7 ##dplyr : 1.0.7
8 ##tidyverse : 1.3.1
9 ##ggplot : 3.3.5
10
11 #Load the necessary packages each time you open Rstudio for running the program with the function
12 library("ggplot2")
13 library("dplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20 ##Input file (csv) name :
21 #Indicate ("T0_data_collection_France_Step3_CORRECTED.csv") - here you need to replace "France" by the name of the country
22 input_file="T0_data_collection_France_Step3_CORRECTED.csv"
23
24 ##verification file (csv) name :
25 ##The csv file should be saved in the same folder as the one containing your data set in csv - here you need to indicate the name of the verification file
26 verification_file="wp5_verification_file.csv"
27
28 ##Indicate the separator used for saving your Excel file in csv (";" or ",")
29 separator=";"
30
31 ##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
32 special_alphabet="NO"
33
34
35 #####
36 here_actud() # Get the current working directory
37
```

The file explorer on the right shows the directory structure of the project:

Name	Size	Modified
..		
.RData	125.9 KB	May 3, 2022,
.Rhistory	23.6 KB	May 18, 2022,
.Rprofile	25 B	May 4, 2022,
Files		
Indicators		
Programs		
renv		
renv.lock	36.4 KB	May 4, 2022,
T0_statistics_programs.Rproj	218 B	May 18, 2022,

A green callout box with the text "'T0_indicators' program opened" is overlaid on the right side of the RStudio window.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

```
T0_statistics_programs - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
T0_statistics_programs — Desktop
Environment History Connections Tutorial
T0_indicators.R* x
Source on Save
1 ##### T0 INDICATORS
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it
5 ###IMPORTANT : R software must be installed on your computer in order t
6
7 ##dplyr : 1.0.7
8 ##tidyverse : 1.3.1
9 ##ggplot : 3.3.5
10
11 #Load the necessary packages each time you open Rstudio for running the
12 library("ggplot2")
13 library("dplyr")
14 library("tidyverse")
15
16 #SET PARAMETERS :
17 #You will need to personalize the variables below with your parameters
18
19 ##Input file (csv) name :
20 #Indicate ("T0_data_collection_France_Step3_CORRECTED.csv") - here you
21 input_file="T0_data_collection_France_Step3_CORRECTED.csv"
22
23 ##Verification file (csv) name :
24 #The csv file should be saved in the same folder as the one containing
25 verification_file="wp5_verification_file.csv"
26
27 ##Indicate the separator used for saving your Excel file in csv ("," or
28 separator=";"
29
30 ##If you have used a specific alphabet (greek, etc) in your template, p
31 special_alphabet="NO"
32
33
34
35 #####
36 here_getwd() # Get the current working directory
37
38
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```



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

The screenshot displays the RStudio interface with the 'T0_indicators.R' script open. The script contains the following code:

```
1 ##### T0 INDICATORS
2
3 #Version of R used : 4.1.2
4 #Rstudio needs to be used for using the program in a simpler way : it is a tool for working on R programs
5 ###IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7 ##dplyr : 1.0.7
8 ##tidyverse : 1.3.1
9 ##ggplot : 3.3.5
10
11 #Load the necessary packages each time you open Rstudio for running the program with
12 library("ggplot2")
13 library("dplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20 ##Input file (csv) name :
21 #Indicate ("T0_data_collection_France_Step3_CORRECTED.csv") - here you need to replace "France" by the name of your country
22 input_file="T0_data_collection_France_Step3_CORRECTED.csv"
23
24 ##Verification file (csv) name :
25 ##The csv file should be saved in the same folder as the one containing your data set in csv - here you need to indicate the name of the verification file
26 verification_file="wp5_verification_file.csv"
27
28 ##Indicate the separator used for saving your Excel file in csv ("," or ";")
29 separator=";"
30
31 ##If you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
32 special_alphabet="No"
33
34
35 #####
36 here we get the current working directory
37
```

The Environment pane on the right shows 'Global Environment' and 'Environment is empty'. A File Explorer window is open, showing the directory structure of the 'T0_statistics_programs' folder, including files like '.RData', '.Rhistory', '.Rprofile', 'Files', 'Indicators', 'Programs', 'renv', 'renv.lock', and 'T0_statistics_programs.Rproj'.

Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)

The program will run entirely.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'TO_indicators' program

Program running

The 'TO_indicators' program can take **quite a long time** (15 to 20 minutes) to run.

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'TO_statistics_programs – Rstudio' window or the program will stop running.

```
R 4.1.2 · C:/Users/tlaguillon/Desktop/TO_statistics_programs/Files/  
+ legend.position="none") size=9),  
+ ggsave(ggsave_label,device="jpeg",width = 35,height=20,units="cm")  
+ }  
+ }
```





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0_indicators' program

Category_name	Subcategory_name	n	nx
1 Bread products	Brioches with fruit	1	Brioches with fruit (n=1)
2 Bread products	Other breads	4	Other breads (n=4)
3 Bread products	Other_sandwich breads / hamburger / hot dog buns	1	Other_sandwich breads / hamburger / hot dog buns (n=1)
4 Bread products	Plain brioches	1	Plain brioches (n=1)
5 Bread products	Plain toasted breads and toasts	1	Plain toasted breads and toasts (n=1)
6 Bread products	Plain white sandwich breads / hamburger /hot dog buns	7	Plain white sandwich breads / hamburger /hot dog buns (n=7)
7 Bread products	Pre-baked breads	1	Pre-baked breads (n=1)
8 Bread products	Pre-packaged breads	8	Pre-packaged breads (n=8)
9 Bread products	Tortilla breads and wraps	1	Tortilla breads and wraps (n=1)
10 Bread products	Wholemeal_cereal_grains brioches	1	Wholemeal_cereal_grains brioches (n=1)
11 Bread products	Wholemeal_cereal_grains sandwich breads / hamburger / h...	4	Wholemeal_cereal_grains sandwich breads / hamburger / h...
12 Bread products	Wholemeal_cereal_grains sandwich breads / hamburger /ho...	1	Wholemeal_cereal_grains sandwich breads / hamburger /ho...
13 Bread products	Wholemeal_cereal_grains toasted breads and toasts	1	Wholemeal_cereal_grains toasted breads and toasts
14 Breakfast cereals	Cereal flakes with chocolate_nuts	2	Cereal flakes with chocolate_nuts (n=2)
15 Breakfast cereals	Cereal preparation to drink	2	Cereal preparation to drink (n=2)

```
R 4.1.2 · C:/Users/t.laguitton/Desktop/T0_statistics_programs/Indicators/11_Tables_Per_cat & tob/
> ##12--tables or descriptive statistics (per subcategory and per type or brand)
> #Set working directory for 12
> working_directory12=base::paste(working_directory,"/11_Tables_Per_cat & tob",sep="")
> setwd(working_directory12)
>
> #####Ligne print fin de programme
> print("All the indicator outputs should appear in the folder 'Indicators'")
[1] "All the indicator outputs should appear in the folder 'Indicators'"
> |
```

End of the running of the program

At the end of the 'T0_indicators' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports outputs (graphs and tables) to your "Indicators" folder in the "" folder. *T0_statistics_programs*





WORK Package 5 – Reformulation and processed food monitoring

After running 'T0_indicators' program

The screenshot shows a Windows File Explorer window titled 'T0_statistics_programs'. The ribbon includes 'Fichier', 'Accueil', 'Partage', and 'Affichage'. The ribbon buttons are: Épingler à Accès rapide, Copier, Coller, Couper, Copier le chemin d'accès, Copier le raccourci, Déplacer vers, Copier vers, Supprimer, Renommer, Nouveau dossier, Nouvel élément, Accès rapide, Propriétés, Ouvrir, Modifier, Historique, Sélectionner tout, Aucun, and Inverser la sélection. The address bar shows the path 'T0_statistics_programs'. The left sidebar shows 'Accès rapide' with 'Bureau' selected. The main pane shows a list of files and folders:

Nom	Modifié le	Type	Taille
Files	10/05/2022 16:18	Dossier de fichiers	
Indicators	05/05/2022 09:19	Dossier de fichiers	
Programs	11/05/2022 13:06	Dossier de fichiers	
renv	06/05/2022 15:55	Dossier de fichiers	
.RData	03/05/2022 09:44	R Workspace	126 Ko
.Rhistory	11/05/2022 17:03	Fichier RHISTORY	32 Ko
.Rprofile	04/05/2022 10:39	Fichier RPROFILE	1 Ko
renv.lock	04/05/2022 10:01	Fichier LOCK	37 Ko
T0_statistics_programs.Rproj	11/05/2022 17:03	R Project	1 Ko

You will need to go to the Indicators folder in the 'T0_statistics_programs' folder





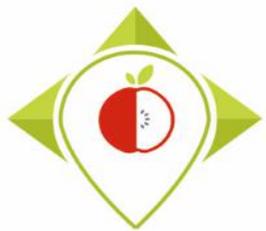
WORK Package 5 – Reformulation and processed food monitoring

After running 'T0_indicators' program

Nom	Date	Type	Taille	Mots clés
6_Pie charts_Distrib...	18/05/2022 11:21	Dossier de fichiers		
8_Boxplots_Per cate...	18/05/2022 11:21	Dossier de fichiers		
9_Boxplots_Per sub...	18/05/2022 11:21	Dossier de fichiers		
10_Tables_Per cat &...	18/05/2022 11:21	Dossier de fichiers		
11_Tables_Per cat &...	18/05/2022 11:21	Dossier de fichiers		
1_Proportion of the ...	18/05/2022 12:29	Fichier JPEG	204 Ko	
2.a_Distribution of t...	18/05/2022 12:29	Fichier JPEG	345 Ko	
2.b_Distribution of t...	18/05/2022 12:29	Fichier JPEG	330 Ko	
2.c_Distribution of t...	18/05/2022 12:29	Fichier JPEG	330 Ko	
2.d_Distribution of t...	18/05/2022 12:29	Fichier JPEG	405 Ko	
2.e_Distribution of t...	18/05/2022 12:29	Fichier JPEG	502 Ko	
3.a_Proportion of th...	18/05/2022 12:29	Fichier JPEG	394 Ko	
3.b_Proportion of t...	18/05/2022 12:29	Fichier JPEG	420 Ko	
3.c_Proportion of th...	18/05/2022 12:29	Fichier JPEG	402 Ko	
3.d_Proportion of t...	18/05/2022 12:29	Fichier JPEG	471 Ko	
3.e_Proportion of th...	18/05/2022 12:29	Fichier JPEG	583 Ko	
4_Proportion of coll...	18/05/2022 12:29	Fichier JPEG	205 Ko	
5.a_Proportion of c...	18/05/2022 12:29	Fichier JPEG	456 Ko	
5.b_Proportion of c...	18/05/2022 12:29	Fichier JPEG	474 Ko	
5.c_Proportion of c...	18/05/2022 12:29	Fichier JPEG	472 Ko	
5.d_Proportion of c...	18/05/2022 12:29	Fichier JPEG	545 Ko	
5.e_Proportion of c...	18/05/2022 12:29	Fichier JPEG	662 Ko	
7_Labeling frequen...	18/05/2022 12:29	Fichier CSV Micro...	1 Ko	

In the Indicators folder, you will find the folders and files containing the graphs and tables created by the 'T0_indicators' program



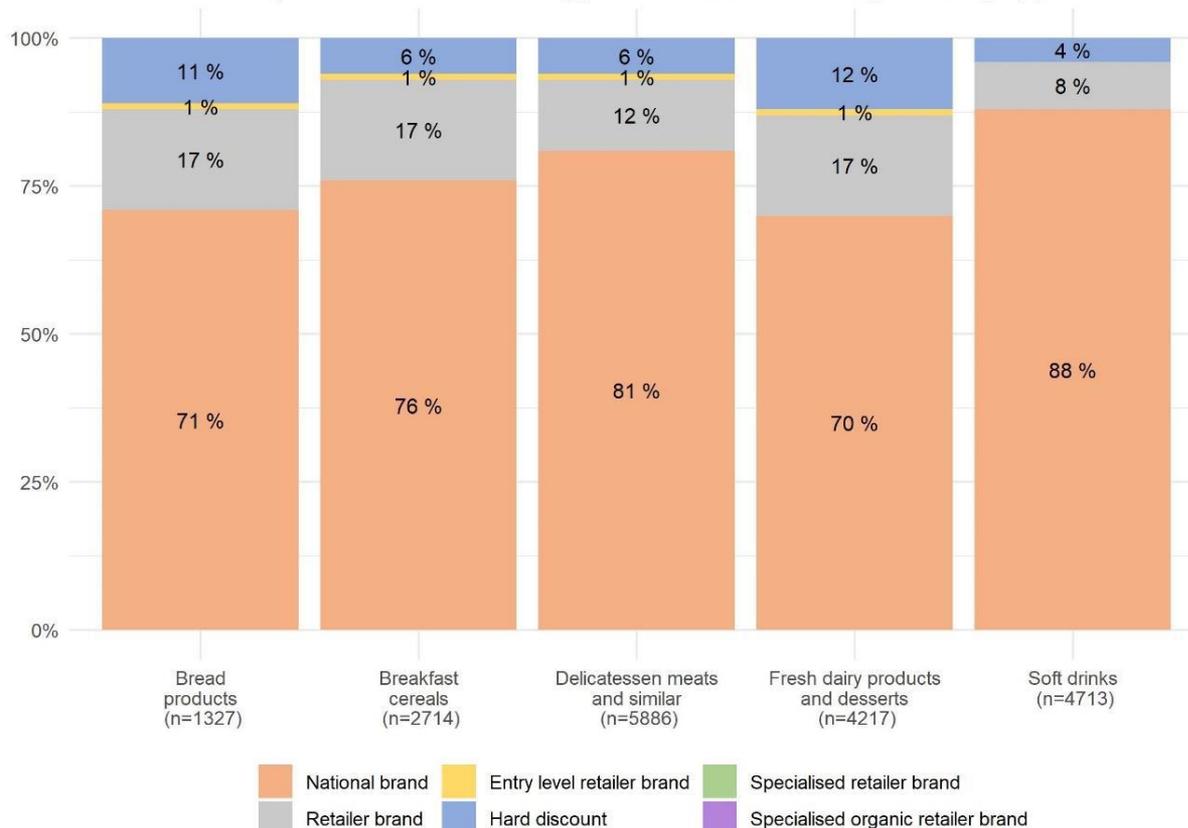


Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

1) Study of the food supply

Proportion of the different types of brand collected (per category)



This output will be numbered « 1_ » in the Indicators folder

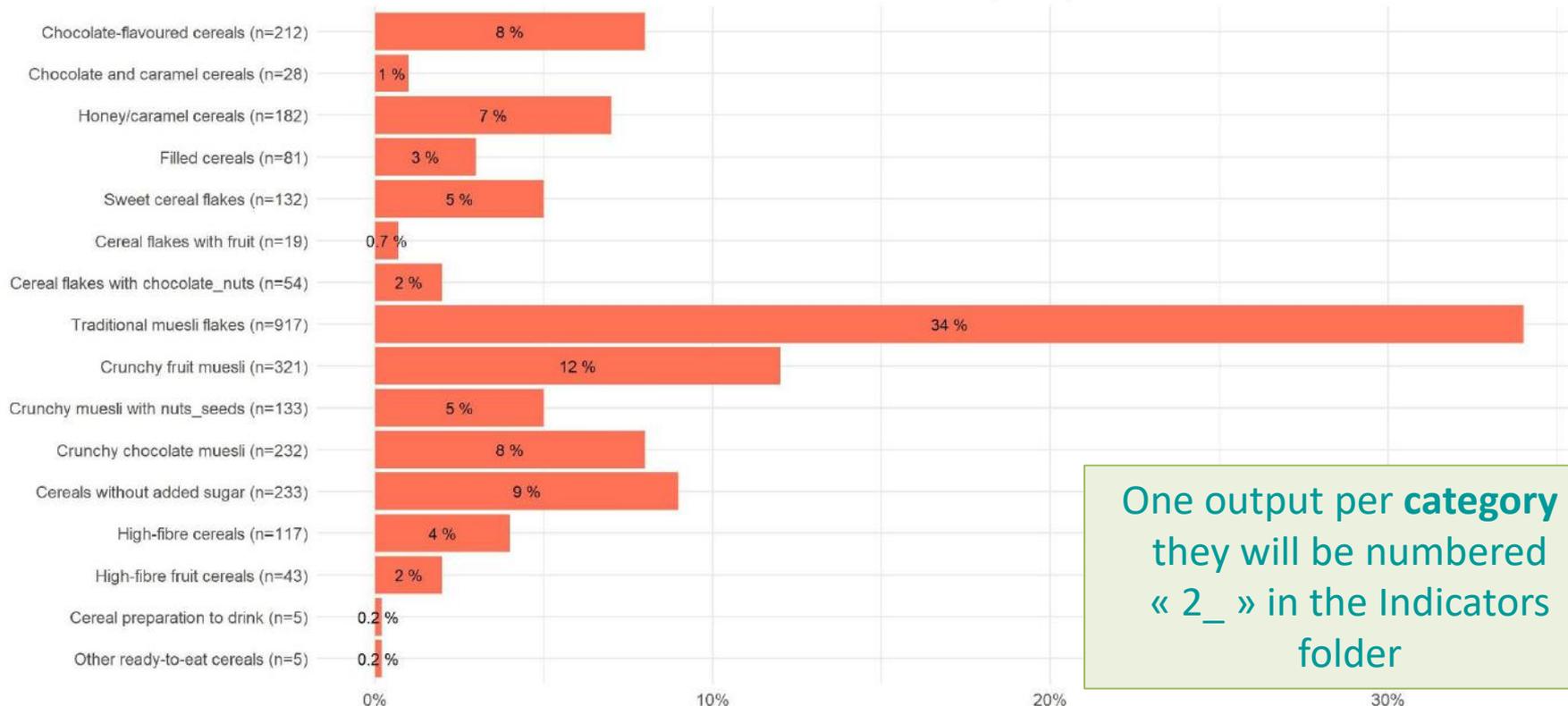


Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

1) Study of the food supply

Distribution of the references collected, by subcategories (in number of references)
Breakfast cereals (n=2714)



One output per **category** :
they will be numbered
« 2_ » in the Indicators
folder



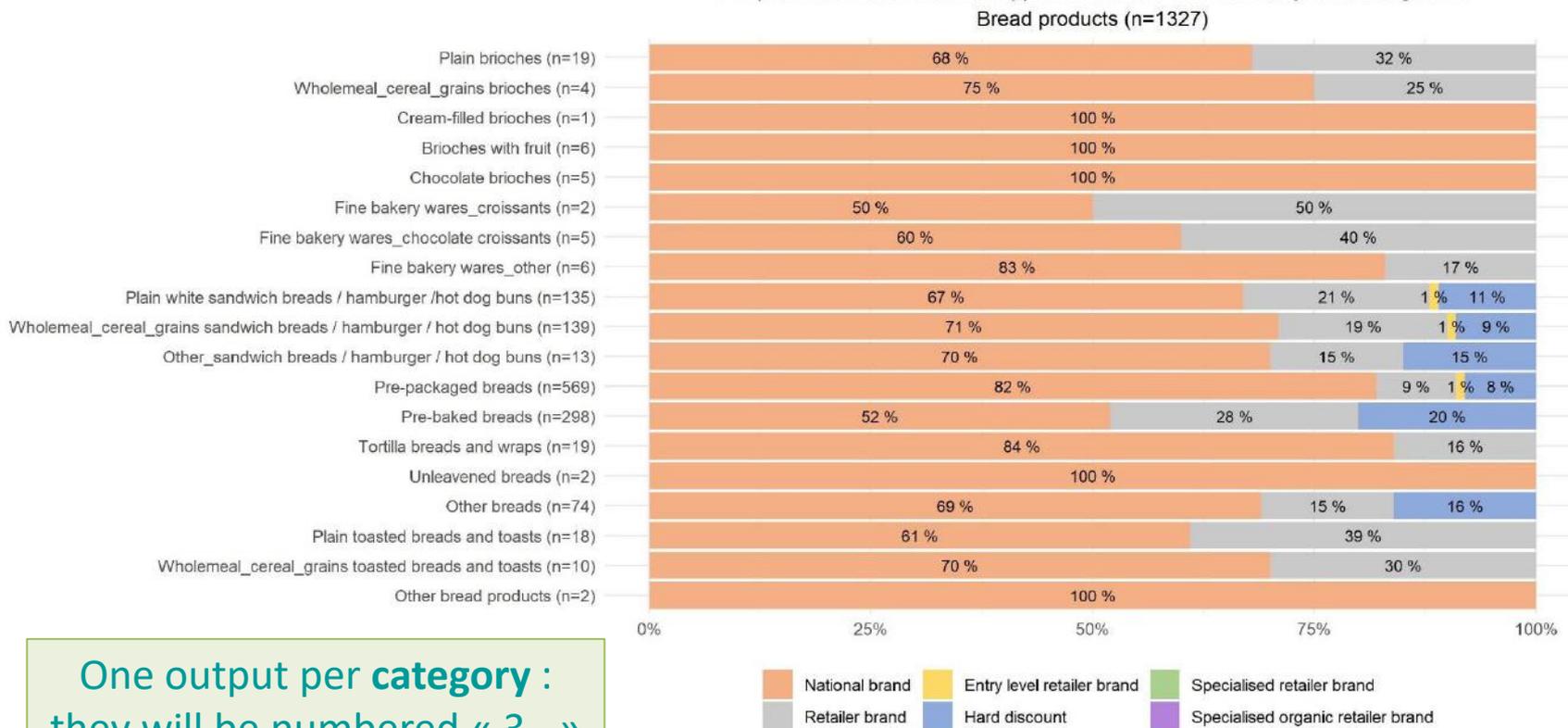
WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

1) Study of the food supply

Proportion of the different types of brand collected, by subcategories



One output per category :
they will be numbered « 3_ »
in the Indicators folder



Co-funded by the European Union's Health Programme (2014-2020)

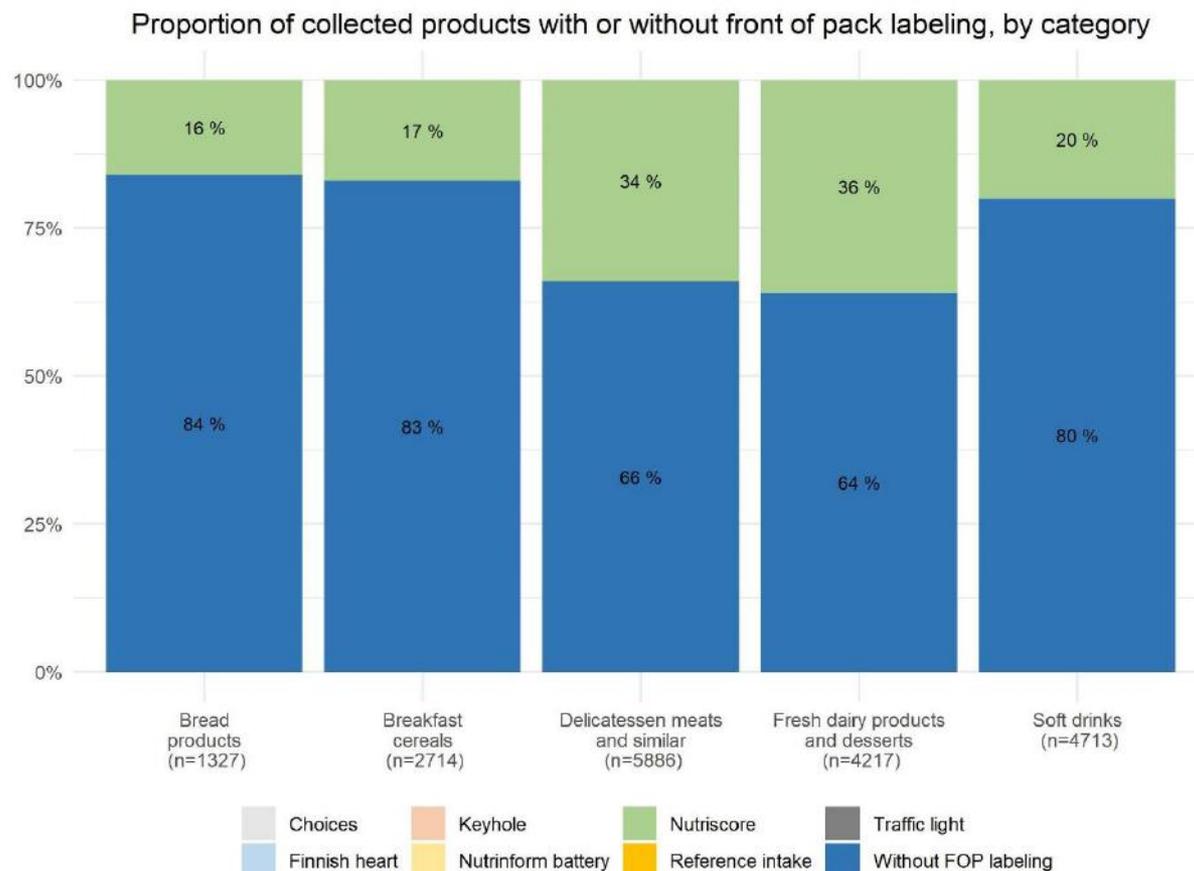


Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

2) Study of the labeling parameters

Front of pack labeling



This output will be numbered « 4_ » in the Indicators folder



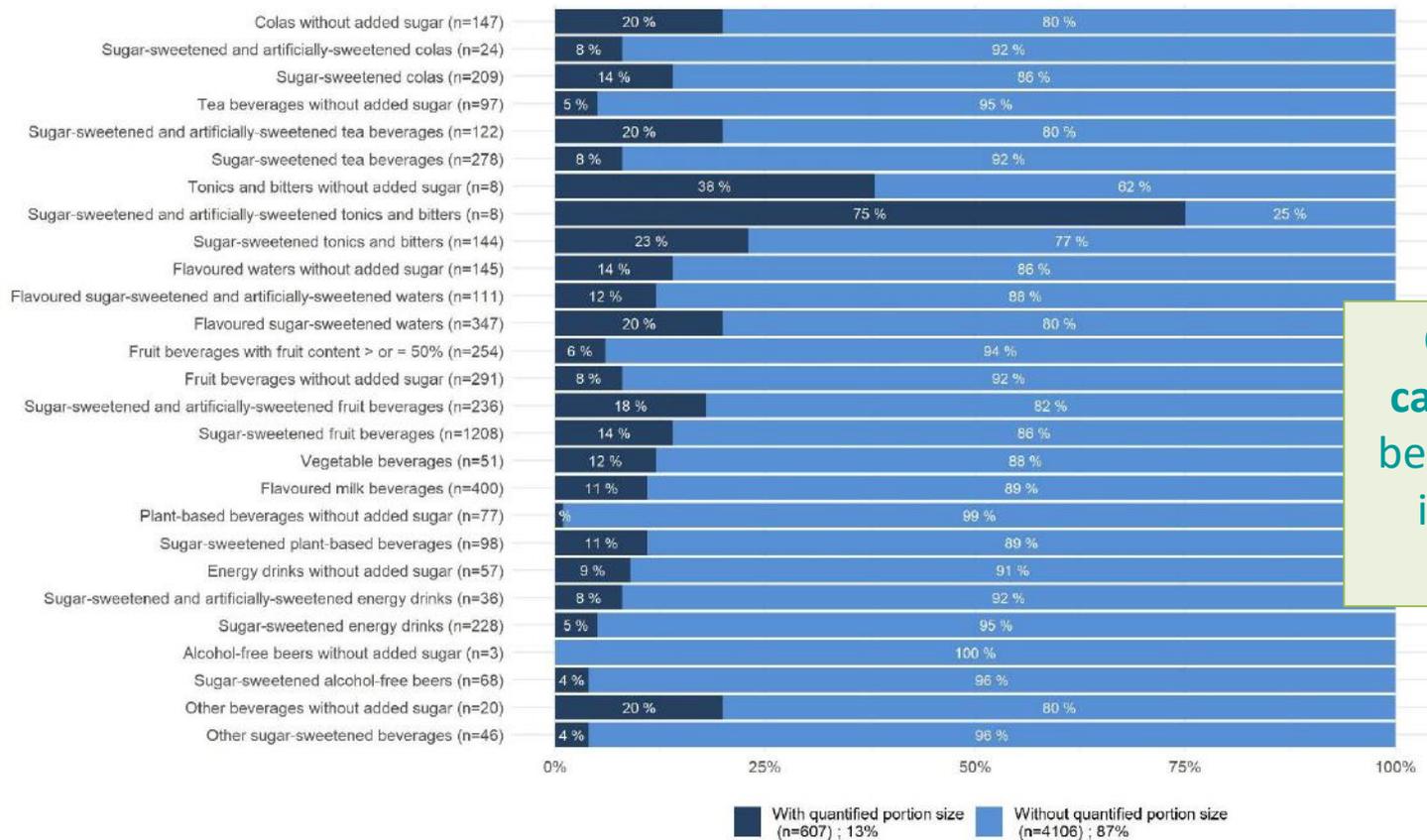
Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

2) Study of the labeling parameters

Portion size

Distribution of products with or without quantified portion size (per subcategory)
Soft drinks (n=4713)



One output per category : they will be numbered « 5_ » in the Indicators folder



WORK Package 5 – Reformulation and processed food monitoring

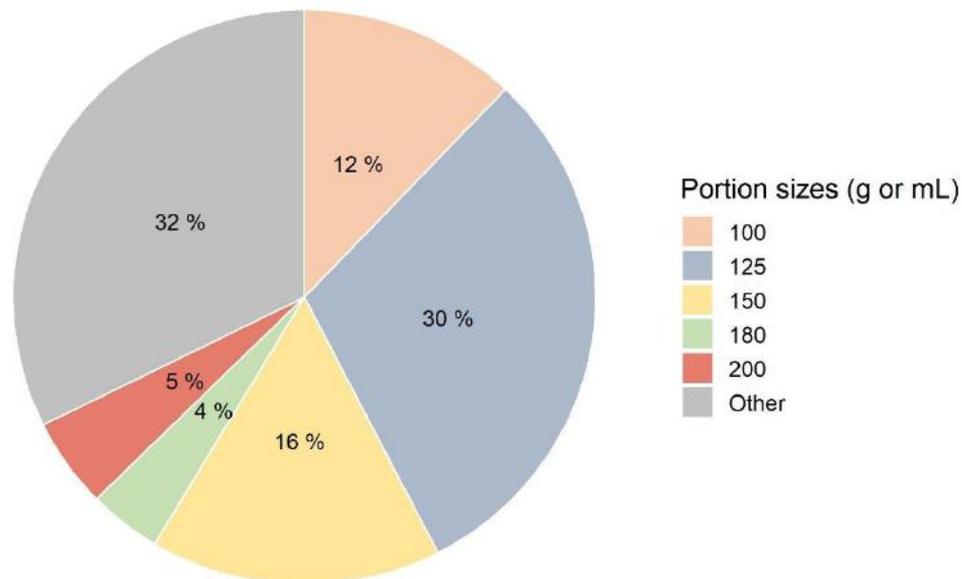
Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

2) Study of the labeling parameters

Portion size

Proportion of the five most represented portion sizes
among collected products, by category
Fresh dairy products and desserts (n=1235)



One output per
category : they will
be numbered
« 6.a_ » in the
Indicators folder

The five most represented portion sizes are represented in the pie chart ; all other portion sizes are gather in 'Other'



Production of indicators for data collected during T0

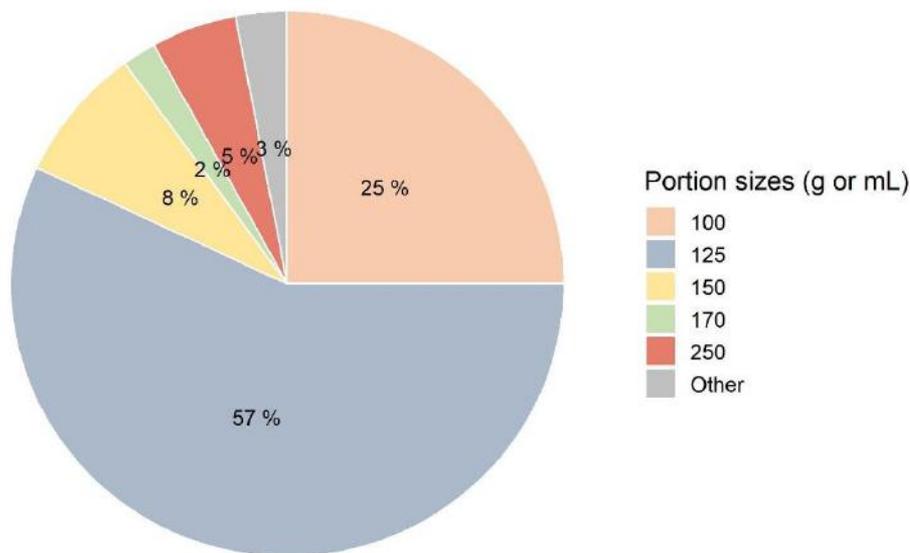
The outputs from the 'T0 indicators' program :

2) Study of the labeling parameters

Portion size

Proportion of the five most represented portion sizes among collected products, by subcategory

Fresh dairy products and desserts : Classic plain yoghurts and fermented milks with no added sugar (n=61)



! One output per subcategory : they will be numbered « 6.b_ » in the Indicators folder

The five most represented portion sizes are represented in the pie chart ; all other portion sizes are gather in 'Other'



WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

3) Study of the labeled nutritional values (state of play of the nutritional composition)

Labeling frequency, by nutrient

Category_name	Energy_kJ	Energy_kCal	Fat	Saturated_fat	Carbohydrates	Sugar	Protein	Salt	Fibre
Bread products (n=1327)	78%	96%	100%	98%	100%	99%	100%	100%	68%
Breakfast cereals (n=2714)	86%	96%	99%	98%	99%	98%	99%	98%	86%
Delicatessen meats and similar (n=5886)	83%	96%	100%	100%	100%	100%	100%	100%	19%
Fresh dairy products and desserts (n=4217)	93%	90%	100%	100%	86%	100%	100%	85%	22%
Soft drinks (n=4713)	77%	98%	97%	97%	100%	99%	97%	97%	16%

This output (in.csv)
will be numbered
« 7_ » in the
Indicators folder





WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

3) Study of the labeled nutritional values (state of play of the nutritional composition)

State of play of the nutritional composition

Nutrients of interest for each category :

	Fat	Saturated fat	Sugar	Protein	Fibre	Salt
Bread products	X	X	X		X	X
Breakfast cereals	X	X	X		X	X
Delicatessen meats and similar	X	X	X	X		X
Fresh dairy products and desserts	X	X	X	X	X	
Soft drinks	X	X	X		X	X

Only for Flavoured milk beverages and Plant-based beverages



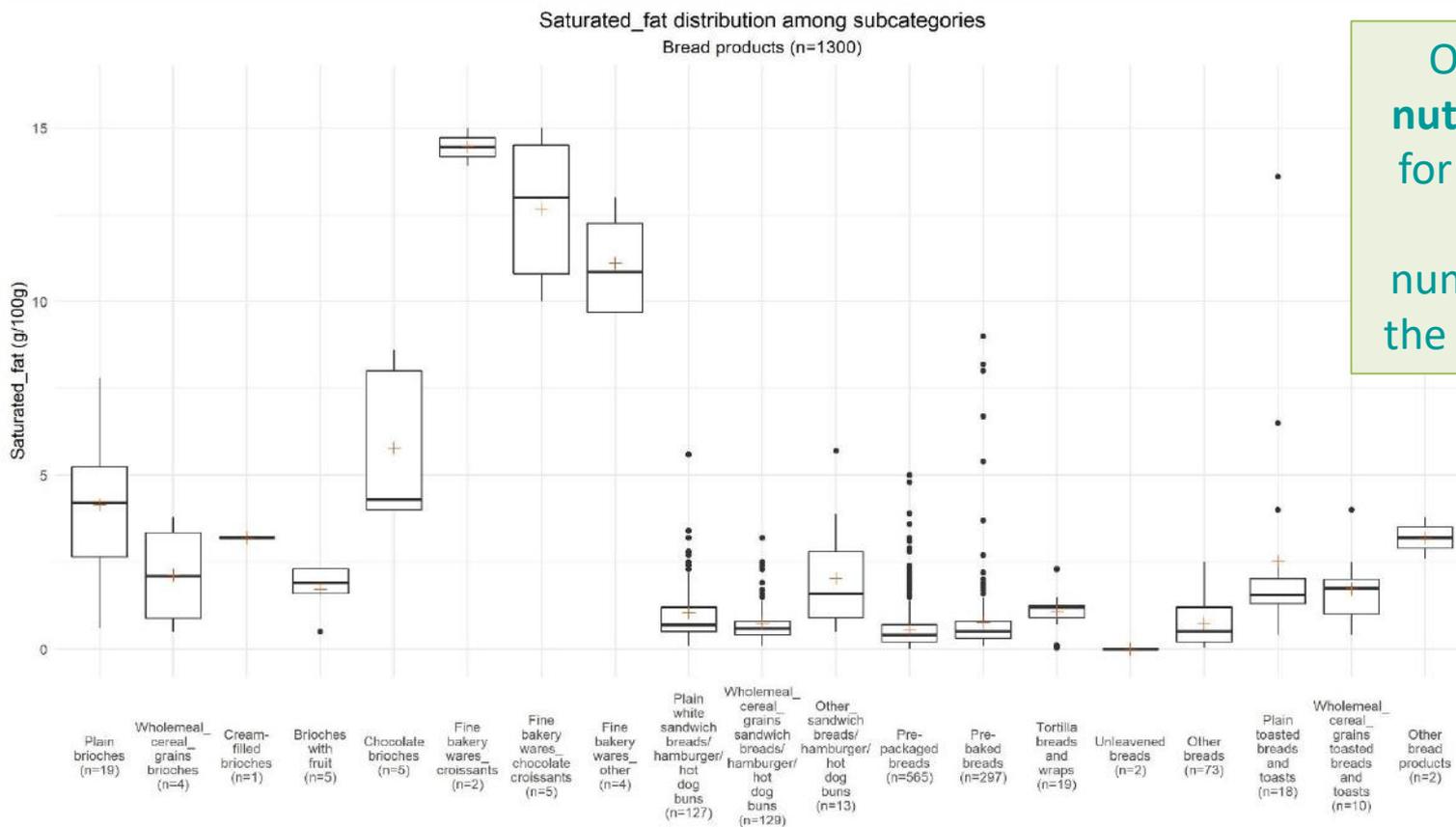


Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

3) Study of the labeled nutritional values (state of play of the nutritional composition)

State of play of the nutritional composition



One output per nutrient of interest for each category : they will be numbered « 8_ » in the Indicators folder



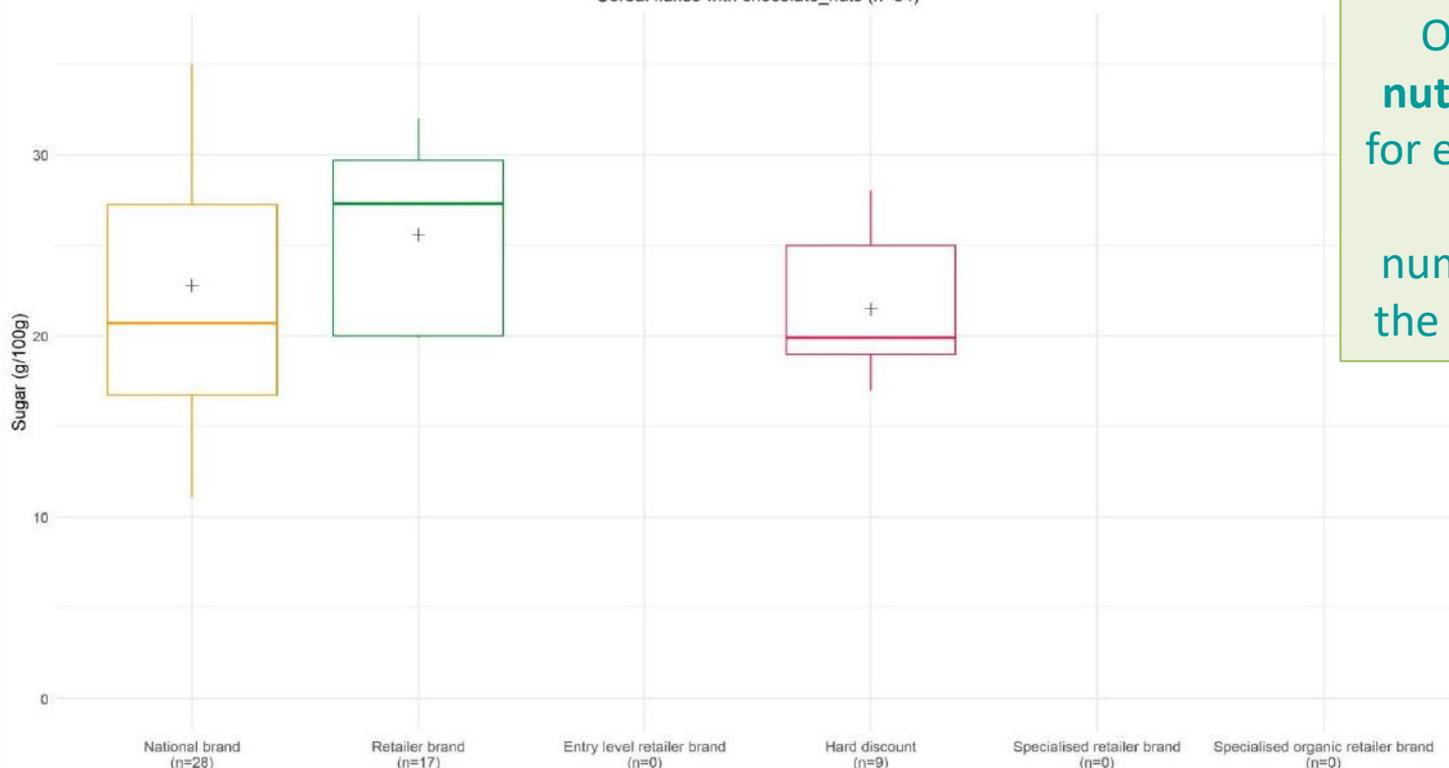
Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

3) Study of the labeled nutritional values (state of play of the nutritional composition)

State of play of the nutritional composition

Sugar distribution among the types of brand, by subcategory
Cereal flakes with chocolate_nuts (n=54)



One output per nutrient of interest for each subcategory : they will be numbered « 9_ » in the Indicators folder

Regarding the proportion of the different type of brand collected, come back to us to decide if these analysis are relevant (not relevant if all brands are not well covered)



WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

3) Study of the labeled nutritional values (state of play of the nutritional composition)

State of play of the nutritional composition

Sugar (g/100g)	Number of products	Minimum	Maximum	First quartile	Median	Third quartile	Mean	Standard deviation	
Cereal flakes with chocolate_nuts	54	11,1	35	19,9	22	28,2	23,5	6,4	
Cereal flakes with fruit	19	7,1	26	14	15,6	18	16,6	5,1	
Cereal preparation to drink	0								
Cereals without added sugar	233	0	11,5	0,8	1,1	1,5	1,3	1,1	
Chocolate-flavoured cereals	212	2,1	40	22	24,9	28,5	24,7	5,8	
Chocolate and caramel cereals	28	23	32	25	27	29	27,1	2,4	
Crunchy chocolate muesli	232	1,6	31,1	17	21	24	20,2	5,5	
Crunchy fruit muesli	321	2,3	41,4	15	19	23	19,1	6	
Crunchy muesli with nuts_seeds	133	1,5	35	12,4	17,4	20	16,2	6,2	
Filled cereals	81	21	44	27,5	29	34	30,4	5,2	
High-fibre cereals	114	2,6	28,4	10,8	14	18	13,7	6	
High-fibre fruit cereals	43	2,8	32	14,2	20	24	19,3	6,9	
Honey/caramel cereals	180	2,2	48	22,7	25	29	25,1	8	
Other ready-to-eat cereals	5	2,7	22,6	3				8,2	
Sweet cereal flakes	131	3	37	5,8				9,6	
Traditional muesli flakes	885	0,4	33	9,3				7,1	

One output (in.csv) per labeled nutrient for each category : they will be numbered « 10_ » in the Indicators folder



4) Production of the report





Production of the report

→ **Each member state will have to produce a report that will be included in the final deliverable of WP5 (D.5.3)**

- All partners should have sent a version of their report **by the end of November 2022**

→ **In the next few weeks, we will share with you (by email and on the Best-ReMaP intranet) a detailed framework to help you build the report :**

- Detailed plan
- Figures and tables to be included
- etc.

We will guide you step by step to facilitate an harmonized production of the report

The program 'TO_indicators' will produce a large number of graphs and tables for each partner and not all of them can be presented in your reports. A selection of the indicators to be inserted in the report will be made and transmitted with all the information for the construction of your reports.

→ **Some statistics could be presented at the final workshop of WP5 (Task 5.2)**





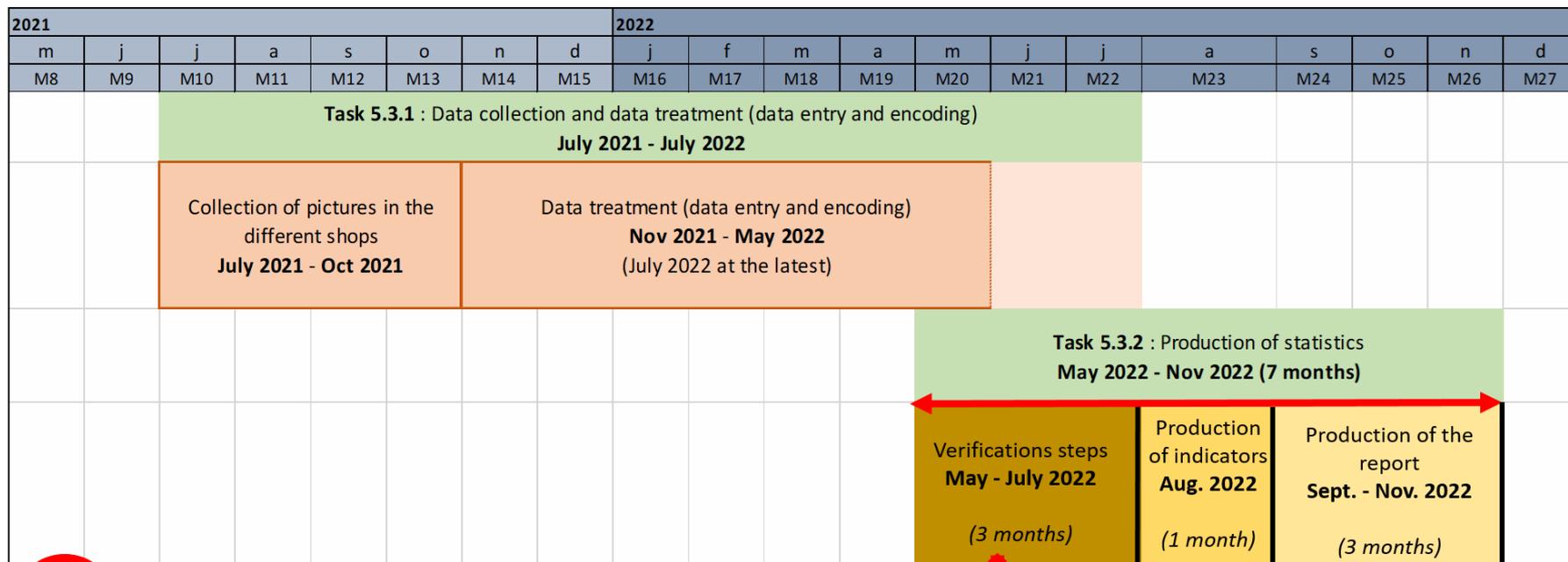
5) Conclusion





WORK Package 5 – Reformulation and processed food monitoring

Timeline of the task 5.3.2



1st June

**Please send us feedback to confirm that the R and Rstudio software are installed
 If you have any problems before this date, please let us know so that we can help you**

End of verifications and corrections to be made

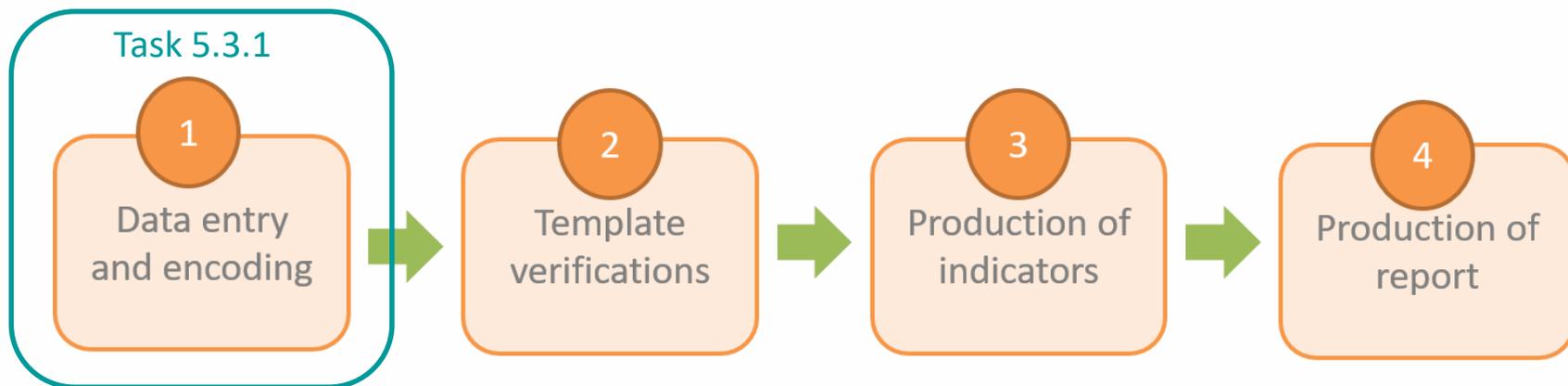
You should have all figures and tables ready and stored in the "indicators" file

Report ready to be sent to wp5

These deadlines are indications so that you can organize yourselves as well as possible



Summary of the steps in task 5.3.2



It is important to finish each step before moving on to the next

- **The data entry and encoding of the collected data must be fully completed before starting the steps of task 5.3.2**
- Instructions for producing the report in step 4 will be provided in detail later
- If you have any questions or need help at any time during the completion of the steps in Task 5.3.2, you can contact us at: wp5_bestremap@anses.fr
- We will also be able to hold individual meetings to best assist you during this task.





Best-ReMaP
Healthy Food for a Healthy Future



**Thank you
for your attention!**

ANSES

wp5_bestremap@anses.fr

The Joint Action focusing on the implementation of validated best practices in
nutrition – Best-ReMaP

This presentation arises from the Joint Action Best-ReMaP. This JA is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings. This presentation was funded by the European Union's Health Programme (2014-2020). The content of this presentation represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.