CBA CASH FLOW TEMPLATE (CEF-T)

- This template is meant to support applicants in the presentation of results of the Cost Benefit Analysis and facilitate the verification of CBA analyses or input in the application form.

 The provision of a standalone **CBA report**, along with your application, **remains required** and this template does not substitute such report.
- Divergences in comparison to the CBA standalone report are acceptable (e.g. due to the introduction of rounded values or limitations of this template).

 Material discrepancies should however be explained in the Comment section of the Input Sheet

 If the CBA standalone report includes different scenarios please fill the template using the data that were used for the determination of the CEF funding requested.
- This excel template is structured in 6 data sheets plus this Notice.

 The Input Sheet is where applicants fill in the values sourced from their CBA standalone report;

 The 2 other sheets are Output Sheets (Economic Analysis and Financial Analysis) and they present the results of the analyses in a standardised format

 Finally, the template contains 2 other "free" sheets which you can you used freely to provide side unput, or side calculations. Please explain in the free cells of the Input sheet, to what extent the input are related to values in
- The results on the Output Sheet will only appear when all data in Input Sheet are in the appropriate format Indeed, this template performs some checks to make sure that there are no mistakes in the fields filled in by the applicant The miskates that are checked by the template are systematically spelled out together with the explanation of how to fill in each cell.
- Next to the fields containing the inappropriate data the template will show a warning message:
 Just below the heading of each section there is a summary of the various tests specifying if:
 all the data is in the appropriate format

 Ok
 the are mistakes that need to be corrected
 Please Correct

Warning

- The template is protected and the applicant can <u>insert values and text only in some predefined cells of the Input Sheet</u>.

 The Output sheets are fully blocked and editing is not possible. Yet, for transparency and comparabilty purposes, it is possible to see the underlying formulas by selecting the cells of all sheets.
- Once filled-out, this template should be uploaded with your application on the Funding and Tender Portal, with a clear title like "CBA Cash Flow Template" followed by your submission reference

GENERAL CBA PRINCIPLES

Applicants will find guidance on the Economic appraisal of their projects in the following guidance documents:

http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf

https://ec.europa.eu/regional_policy/sources/docgener/guides/vademecum_2127/vademecum_2127_en.pdf

 $\underline{\text{https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/cef/guidance/cinea-guidance-on-economic-appraisal cef-t en.pdf}$

This template therefore refers to concepts and approaches used in the DG REGIO methodology.

Applicants can refer to it for additional clarification regarding the definition of concepts such as the Conversion Factors, Willingness to Pay, Discount rates, Rule of Half, etc.

In any case the CBA has to follow the main principles set out below:

- To rely on the opportunity cost principle
- To express the economic performance in monetary terms
- To use the incremental approach
- To have a long term perspective

In this template, without prejudice to existing EU standards, some technical simplification options have been chosen to harmonize the input process.

HOW TO FILL IN THE SHEET "INPUT"

- In the following sections a visual presentation of the boxes to be filled (with examples for their content) is provided together with a text explanation of which values should be used.
- Most of the categories allow for a maximum of 15 items (rows). Because the structure of the template is fixed if necessary group some of such items to respect the limit.
- Monetary values should be expressed in Euro. If national currencies are used in the CBA standalone report please specify in the Comment section which exchange rate is used.
- When filling in the Input Sheet, absolute values should be used but in case of avoided investment costs (section "investment costs") and cost savings (section "Operating costs") where a negative sign is needed.
- For comparability reason with input provided in the Standalone report, or consitency between the Economic Analysis and the Financial Analysis, Real (constant) values should be used in the spreadsheet. Should current (nominal) values have been however used, the inflation rate foreseen is to be specified in the comment box at the end of the "Input Sheet".

MAIN ASSUMPTIONS OF THE ANALYSIS **Cell G11** Please choose a time reference from the <u>drop-down</u> list. The number of years should not be shorter than 5 years or longer than 50 Reference period (n of years) years. For projects with very long economic life it is recommended to calculate a residual value that can take into consideration the potential of the years exceeding year 50. The reference period to be used in this template should include both the development and the operational phases. Note that this value will define the number of columns in both the Output sheets and the Input Sheet. In particular, columns beyond the reference period (after the year plugged in Cell G13) can still be filled but will appear with a strikethrough effect showing that those values are not taken into consideration in the analysis. Please note that the values suggested by the DG REGIO methodology (page 42) should be considered as including the implementation (construction) period. It is not possible to insert text or values different from numbers between 5 and 50. 2022 **Cell G12** The reference year of the analysis should be the year of the call for proposals. First year in the reference In the case of development costs incurred in the year(s) before the reference year, these past costs should be capitalized, using the discount rate, and reported in the reference year. In the case no development costs are incurred in the reference year, simply indicate 0 as a value in the associeted columns. It is not possible to insert text or negative values in this cell. Social Discount Rate (%) 3% cell G15 Please specify the Social Discount Rate used for the "Economic Analysis" of the CBA. The DG REGIO methodology recommends a value of 5% in real terms for projects in Cohesion Countries and a value of 3% in real terms for other Member States. Different values are possible but shall be justified (e.g. when defined at national level). It is not possible to insert text or negative values in this cell. Financial Discount Rate (%) 4% Cell G16 Please specify the Financial Discount Rate used for the "Financial Analysis" of the CBA. This will remain constant as from reference year plus one and for the whole reference period. Section 2.3 of the Guide on economic appraisal for CEF-Tranport projects, as well as Frequently asked questions, clarify what are the

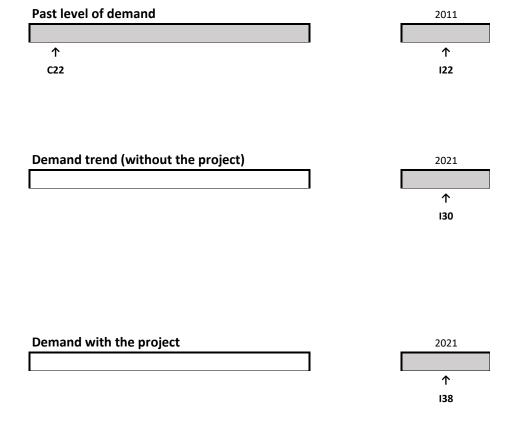
Sheet" above).

It is not possible to insert text or negative values in this cell.

requirements to be met by the applicant to deviate from the 4% in real terms reccommended in the DG REGIO methodology.

Please ensure alignment of the discount rate with the use of constant or real values in the spreadsheet (See "How to fill in the Input

DEMAND ANALYSIS



INCREMENTAL INVESTMENT COSTS

Initial Investment

	Conversion Facto	r	
Initial investment item/category	analysis	Total	2021
Start up and technical costs	0,50	100.000.000	10.000.000
^	^		↑
C50	F50		150

Guidance on how to use transport models for estimating the demand in the context of project appraisals can be found here http://www.jaspersnetwork.org/plugins/servlet/documentRepository/downloadDocument?documentId=222

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/427118/webtag-tag-unit-m1-1-principles-of-modelling-and-forecasting.pdf

- **Cell C22** Please insert a clear name to define the service that will be replaced or upgraded by the project
- **Cell 122** Please specify the volume of usages of the service 10 years ago. Provide in the following columns (J22, K22, etc.) the number of usages in the remaining 9 years until now.

It is not possible to insert text or negative values in this cell.

Cell i30 Please specify the trend in volume of usages of the service for the first year of the reference period if the project was not implemented. Provide in the following columns the number of usages foreseen in the next years (J30, K30, etc.). The values of these columns are to be sourced from the demand analysis and correspond to the total quantity of the services provided (e.g. number of train passangers, tonnes of freight transported).

For projects subject to competition the demand trend without the project could be negative. This could happen for example if without the project users decide to change supplier (e.g. ships calling other ports because without the project they won't be up to the new standards).

It is not possible to insert text or negative values in this cell.

Cell i38 Please specify the volume of usages of the service for the first year of the reference period in the scenario in which the project is implemented. Provide in the following columns the number of usages foreseen in the next years (J38, K38, etc.). The values of these columns are to be sourced from the demand analysis and correspond to the total quantity of the services provided (e.g. number of train passangers, tonnes of freight transported).

It is not possible to insert text or negative values in this cell.

Cell C50 Please insert a clear name to define this item or category of the Investment Costs. Examples of categories include "Civil Works"; "Steel Structures"; "HV Equipment"; "IT Equipment"; "Start up and development costs". "land acquisition cost". Please note that the Total investment costs might go beyond eligible costs.

Where relevant, dismantling / decommissionning costs might be included in this section.

Cell F50 Please specify the Conversion Factor applicable to this item or category of the Investment Costs. This can be based on border prices, a Standard Conversion Factor or Shadow Prices (e.g. Shadow wages for manpower). At least, corrections should be applied to depurate market prices from fiscal factors, e.g. an excise tax on import or VAT. CBAs that do not make any correction to the financial values implicitly assume a conversion factor of 1. If the Convertion Factor is not fixed for the whole reference period please insert in this cell the weighetd average of the different Conversion Factors.

Additional guidance on the Conversion Factors can be found on the DG REGIO methodology sections 2.8.1 to 2.8.5.

Replacement costs

	Conversion Factor		
	analysis	Total	2021
Replacement costs	0,78	10.000.000	-
•	↑	-	↑
	F79		179

Residual value

Total 49.530.154 for financial analysis Amount

38.450.321 for economic analysis

It is not possible to insert text or negative values in this cell.

Cell 150 Please specify the value of Investment Costs cash flows for this item or category in the first year of the reference period. Provide in the following columns the values incurred in the following years (J50, K50, etc.).

Savings related to avoided investment costs should appear with a negative values (instead of positive values). The same principles applies to the disposal of existing assets.

It is not possible to insert text in this cell.

Repeat the process above, for as many items as needed, by filling in a new line (maximum 22 lines)

Cell F79 Please specify the Conversion Factor applicable to the replacement costs. This could be based on a Standard Conversion Factor or a (weighted) average of conversion factors relevant to the items/categories comprising the replacement costs. At least, corrections should be applied to depurate market prices from fiscal factors, e.g. an excise tax on import.

CBAs that do not make any correction to the financial values implicitly assume a conversion factor of 1. If the Convertion Factor is not fixed for the whole reference period please insert in this cell the weighetd average of the different Conversion Factors.

It is not possible to insert text in this cell.

Cell 179 Please insert in this and the following columns (J79, K79) the cash values of the Replacement costs. They represent costs for devices or specific parts of the infrastruture that have to be replaced within the reference period to ensure that the infrastructure itself remains operational.

Additional guidance can be found on the DG REGIO methodology sections 2.7.3.

It is not possible to insert text in this cell. Values inserted in columns after the end of the reference period (the year in cell G13) are disregarded.

Cell D85

Please insert the amount of the residual value for the financial analysis at the end of the reference period. The recommended approach is to calculate the remaining value of the assets/components based on a standard accounting depreciation formula (book value).

In any case the methodology used to compute the residual value, as well as the depreciation life for the concerned components should be specified in the comment box at the end of hte Input Sheet.

It is not possible to insert text or negative values in this cell.

Cell D86 Please insert the amount of the residual value for the economic analysis. If the residual value for the financial analysis is calculated using the net present value of future cash flows, the residual value for the economic analysis shall also be the present value of economic benefits net of economic costs in the remaining life of the project. If the depreciation formula is used in the financial analysis, the economic residual value can then be obtained by applying an ad hoc conversion factor.

Additional guidance can be found in the DG REGIO methodology sections 2.8.9.

It is not possible to insert text or negative values in this cell.

INCREMENTAL OPERATING COSTS

Service name	Unit cost analysis	Conversion factor analysis
Service 1	6,25	0,8
↑	↑	↑
C93	E93	F93

Unit of measure	2021
pax	100.000,0
↑	↑
H93	193

Cell C93

Please insert a clear name to define the new or upgraded service provided by the project for which operational costs are incurred. Do not insert in this section the cost of financing (i.e. interest payments), asset depreciations or fiscal costs (i.e. taxes).

Cell E93 Please specify the unitary cost that is incurred to operate and maintain the infrastructure for the provision of a single usage of the new or upgraded service. In case of cost savings use a negative value. For fixed costs insert here 1 and the full amount in Cell I93 (and next columns). A project can have cost savings in both variable and fixed operating costs.

It is not possible to insert text in this cell. This cell cannot be empty if 193 or one of the following columns has been fillied in.

Cell F93 Please specify the Conversion Factor applicable to this item or category of the Investment Costs. This can be based on border prices, a Standard Conversion Factor or Shadow Prices (e.g. Shadow wages for manpower). At least, corrections should be applied to depurate market prices from fiscal factors, e.g. VAT or excise tax on import. CBAs that do not make any correction to the financial values implicetly assume a conversion factor of 1. If the Convertion Factor is not fixed for the whole reference period please insert in this cell the weighetd average of the different Conversion Factors.

Additional guidance on the Conversion Factors can be found on the DG REGIO methodology sections 2.8.1 to 2.8.5. It is not possible to insert text in this cell. This cell cannot be empty if I93 or one of the following columns has been fillied in.

Cell H93 Please specify the unit of measure used to quanitfy the single usage of the service (e.g. passengers, tonnes of freigth) It is not possible to insert values (numbers) in this cell.

Cell 193 Please specify the volume of usages of the service for the first year of the reference period. Provide in the following columns the number of usages foreseen in the next years (J93, K93, etc.). The values of these columns are to be sourced from the demand analysis of the CBA

It is not possible to insert text in this and next cells.

Repeat the process above, for as many items as needed, by filling in a new line (maximum 15 lines)

Cell 1128 This row has to be filled in only if the project is generating cost savings and some (or all) of these savings are not retained by the promoter. Savings are not retained for example when the promoter decides to transfer the benefit to users by reducing tarifs). In this case please specify in this cell the volume of foregone revenues that will result from the reduction of tariffs.

Another situation where cost savings are transferred is when a promoter, regularly receiving operating subsidies, faces a reduction of such subsidies following a decrease in relation to the cost savings achieved. In this case specify in this cell the amount of foregone operating subsidy.

Provide in the following columns the values foreseen in the next years (J128, K128, etc.).

INCREMENTAL REVENUES

(for financial analysis)

Cell C135 Please insert a clear name to define the service provided by the project that generates revenues.

Cost savings transferred to users or public budget

100,0

Service 1	10,2	pax	150.000,0
↑	↑	↑	↑
C135	E135	H135	I135

Please be careful when the analysis is consolidated (i.e. owner and operators together) because some fares paid by users appear as a cost for consumers and as a revenue for producer. These two flows cancel out and should be excluded. Only revenues from not consolidated parties shall be recognised. Please mention explicitly in the open box for comments if certain cash flows have been consolidated.

Cell E135 Please specify the unitary tariff that is charged to a single usage of the service (e.g. average passanger ticket, access charges)

If the unit tariff is not fixed for the whole reference period please insert in this cell the weighetd average of the different unitary tariffs. If the unit tariff cannot be singled out please insert "1" in this cell and the full amount or revenues in Cell I135 and following columns.

It is not possible to insert text in this cell. This cell cannot be empty if I135 or one of the following columns has been fillied in.

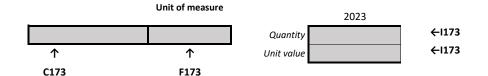
Cell H135 Please insert the unit of measure used to quantify the single usage of the service (e.g. passengers, tonnes of freigth) It is not possible to insert values (numbers) in this cell.

Cell 1135 Please specify the incremental volume of usages of the service for the first year of the reference period. Provide in the following columns the number of usages foreseen in the next years (J135, K135, etc.). The values of these columns are to be sourced from the demand analysis and correspond to the total incremental quantity of the services provided (e.g. number of train passangers, tonnes of freight transported).

Normally the values in this cell is the difference between the demand with the project for the first year of analysis and the demand without the project for the first year of analysis (i.e. cell I38 - cell I30). It is not possible to insert text in this cell.

Repeat the process above, for as many items as needed, by filling in a new line (maximum 15 lines)

ECONOMIC BENEFITS AND COSTS (for economic analysis)



Cell C173 Please insert a clear name to define the economic benefit or cost resulting from the project. Typical benefits in the field of transport are the value of travel time for passengers and freight, change in vehicle operating costs, change in accident numbers, change in noise emissions and change in greenhouse gas emissions and other polluting emissions. The CBA should not try to be exhaustive but should concentrate only on the main ones.

Categories of externalities can be found in DG MOVE "Handbook on External Costs of Transport":

 $\underline{https://ec.europa.eu/transport/sites/transport/files/studies/internalisation-handbook-isbn-978-92-79-96917-1.pdf}$

Rail freight projects can refer to the following guidance prepared by JASPERS on Appraising the Economic Impacts: http://www.jaspersnetwork.org/plugins/servlet/documentRepository/downloadDocument?documentId=501

Cell F173 Please insert the unit of measure used to quanitfy benefits (e.g. "hours" for time savings, "tonnes" for CO₂ emissions, "vehicle*km - vkm" for traffic)

It is not possible to insert values (numbers) in this cell.

Cell 1173 Please specify the quantity of incremental benefit/cost for the first year of the reference period. Provide in the following columns (J173, K173, etc.) the incremental quantity of benefit/cost foreseen in the next years. Examples of these values are the number of hours (for travel time savings), the tonnes of CO₂ emissions (for greenhouse gas emissions reductions), the number of km travelled times the number of vehicles travelling (for traffic).

It is not possible to insert text in this cell. Negative values are possible but should be used only for series with switching sign

SOL	JRCES	OF	FINA	NCI	NG
300	nclo	UГ		w	140

Max Co-funding Rate

20%

Works

Studies

	Total	2021
Eligible cost - Works	95.000.000	10.000.000

C227→

C228→

Eligible cost - Studies	2.000.000	400.000

Other public contribution	

Cell 1173 Please specify the monetary unit value of these economic benefits and costs for the first year of the reference period. Examples of these unit values are the value in euro of an hour of travel (€/h) or the value of a tonne of CO₂ emitted in the atmosphere (€/Co2t). Provide in the following columns the values of the following years (J173, K173, etc.).

For economic costs (increase of cost or reduciton of benefits) enter a negative value for its monetary unit.

Applicants can use units estimated in DG MOVE's Report "Handbook on External Costs of Transport": https://ec.europa.eu/transport/sites/transport/files/studies/internalisation-handbook-isbn-978-92-79-96917-1.pdf

For Benefits related to the Consumer Surplus (such as travel time and road users Vehicle Operating Costs), the "Rule of Half" applies and the benefit should be counted in full or half according to the nature of the traffic that is generating them.

For pre-exisiting traffic (existing users), the full benefit can be counted (100%). For traffic induced and/or diverted from other routes or modes by the project (new users) only half of the benefit should be considered and the value of this cell should be 50% of the total. Where relevant please adjust the unit value to consider this factor.

Additional guidance on the Rule of Half can be found on the DG REGIO methodology pages 89 and 93.

It is not possible to insert text in this cell. This cell cannot be empty if I166 has been fillied in.

Repeat the process above, for as many items as needed, by filling in a new line (maximum 15 lines)

Cell C227 Please insert the maximum rate of co-funding for works activites , as per the relevant Call Text and information on the Funding & Tender Portal

It is not possible to insert text or negative values in this cell.

Cell C228 If applicable (typically Mixed proposals) please insert the maximum rate of co-funding for studies as specified in as per the relevant Call Text and information on the Funding & Tender Portal

It is not possible to insert text or negative values in this cell.

Cell I226 Please specify the value of Eligible Investment Costs cash flows of works activities in the first year of the reference period. Provide in the following columns the values of the following years (J226, K228, etc.). Make sure these values correspond to those presented in Application Form

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell I228 When "Mixed" proposals (both Works and Study) are permitted under the Call Documents, please specify the value of cost of studies in the first year of the reference period. Provide in the following columns the values of the following years (J228, K228, etc.).

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell 1231 Please specify the amount of other (national, regional or local) public contribution expected in the first year of the reference period. Provide in the following columns the values of the following years (J231, K231, etc.).

If a public contribution has already been received plug its value in the first year of reference (Cell I231).

Equity	10.000.000	1.000.000
Debt	66.000.000	7.000.000
		2022
Debt Service (including in	terests)	-
	i	
Taxes		23.155
Other resources		7.560

A I LICANTI COMMUNICIONE	APPL	ICANT	COMI	MENTS
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Comments		

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell 1232 Please specify the amount of own resources or equity provided by investors expected in the first year of the reference period. Provide in the following columns the values of the following years (J232, K232, etc.).

If an equity investment already took place plug its value in the first year of reference (Cell I232).

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell 1233 Please specify the amount of loan provided by investors expected in the first year of the reference period. Provide in the following columns the values of the following years (J233, K233, etc.).

If a loan has already been drawn from a valid credit line plug its value in the first year of reference (Cell I233).

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell 1238 Please specify the amount for the repayment of interest and principal/capital on the debt ("debt service") expected in the first year of the reference period. The repayment typically start when some operations begin (after completion of the construction).

Therefore, it is common that in the first years there are no repayments. Provide in the following columns the values of the following years (J238, K238, etc.).

Make sure that to the interest rates used to calculate the interest payments are coherent with the rest of the analysis and use real rates if the analysis is carried out at constant prices and nominal rates if the analysis is carried out at current prices.

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell 1239 Please specify the amount of taxes on capital/income and other direct taxes expected in the first year of the reference period. Provide in the following columns the values of the following years (J239, K239, etc.).

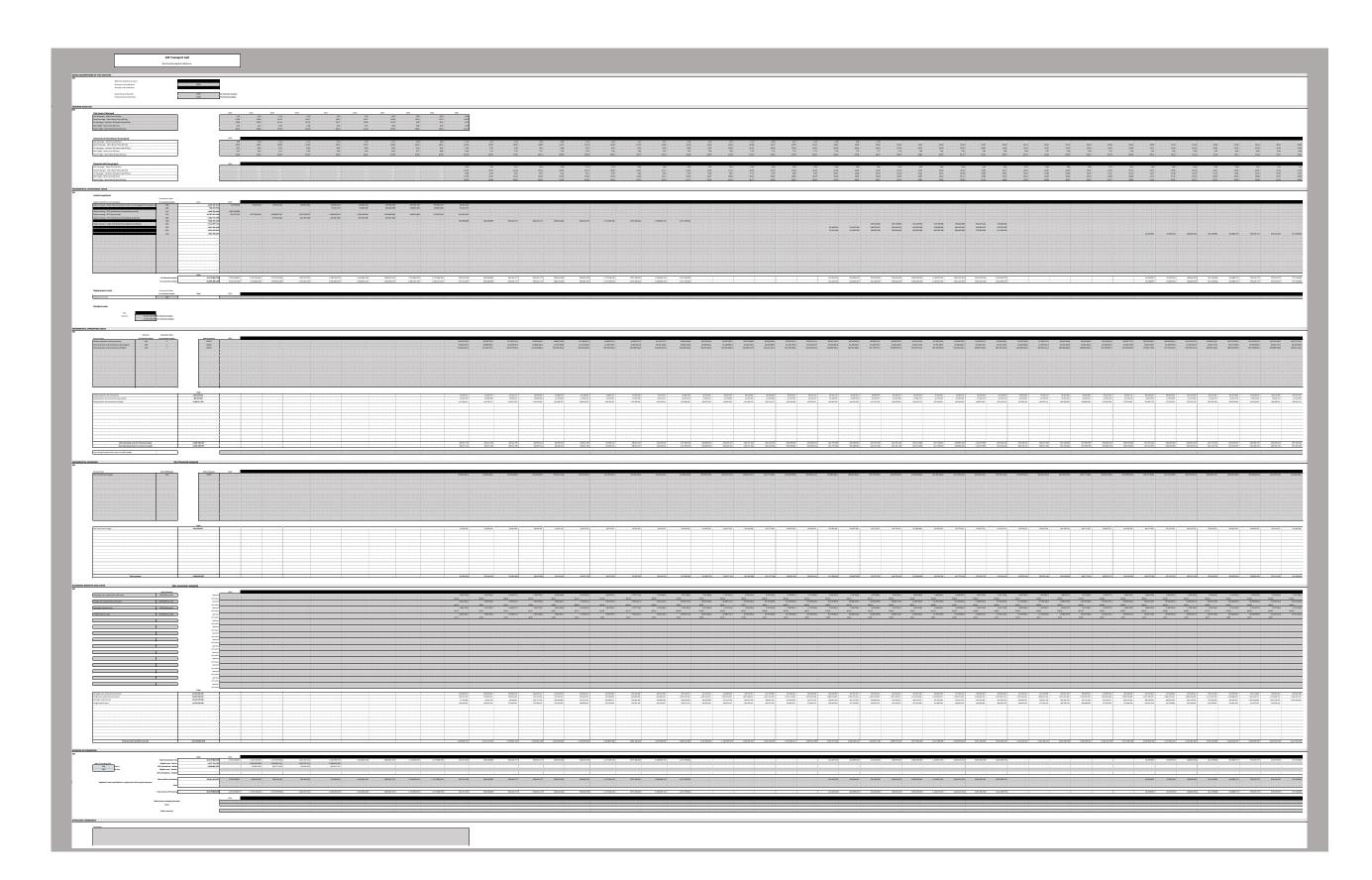
It is not possible to insert text or negative values in this cell and those in the next columns.

Cell 1241 When applicable please specify the amount of additional resouces that is available to ensure the financial sustainability of the project expected in the first year of the reference period. Provide in the following columns the values of the following years (J207, Examples of such income are operating subsidies, cross revenues from other activities of the promoter or additional equity. If you fill in this row make sure an explanation for these amounts is available and make sure that these resources are not a duplication of amounts already presented above.

Working capital cycle does not need to be specified in this file

It is not possible to insert text or negative values in this cell and those in the next columns.

Cell C240 Please use this box to specifiy: (i) the inflation rate in case the analysis is in current (nominal) prices; and (ii) the methodology used to determine the residual value. You may also provide here any supporting explanations to the input used in your spreadsheet, especially with regard to methodological options retained or additional considerations. Use "Alt + Enter" to write text on a new line.



	CEF TRANSPORT CALL Financial Analysis																			
	Structured proposal reference:																			
Return on investment																				
without CEE	NPV @ 5% 2023																			4
Project investment cost	-17.928.037.896 -2.730.428.047 -1.101.178.465 -1.377.329.	81 -1.523.742.731 -1.430.702.578 -1.361.064.438	-1.600.067.167 -1.741.839.025 -1.277.808.789	-545.237.109 -196.208.089 -39	2.416.177 -392.416.177 -588.624.2	66 -784.832.355 -1.177.248.532 -1.3	373.456.621 -1.569.664.710 -1.177.248.532	2			-121.824.724 -243.649.447	-521 204.029 -764.853.476 -1.008	502.924 -1.130.327.647 -1.631.422	354 -1.543.502.764 -1.022.298.735	- -		46.269.967	-92.539.934 -138.809.902	-231.349.836 -323.889.770 -370.159	9.737 -3
Replacement cost Project O&M costs	1.343.057.576						88.025.517 88.522.201 137.469.078		2 400 227 404 400 422 2				COL 001 403 330 010 400 00	447 440 033 000 407 030 440			400 000 004 400 004 004	400 247 002 200 004 042		
Project OSM costs Total revenues	1.343.057.576						95.202.336 96.144.579 113.285.462													
Residual value of investment	2.165.841.996																			
FNPV(C)	-12.928.708.488 -2.730.428.047 -1.101.178.465 -1.377.329.	81 -1.523.742.731 -1.430.702.578 -1.361.064.438	-1.600.067.167 -1.741.839.025 -1.277.808.789	-361.524.571 -16.352.091 -21	2.799.314 -212.930.457 -408.555.7	58 -604.750.426 -995.906.334 -1.1	190.228.768 -1.384.997.930 -926.493.992	2 239.386.704 239.897.866	6 240.581.469 241.309.8	188 242.104.362 242.872.94	4 121.835.041 847.010	-275.876.334 -518.401.092 -758	986.179 -877.331.334 -1.374.802	398 -1.283.162.329 -647.518.475	369.106.475 372.264.704 375.834	612 379.737.588 383.782.466	387.936.893 345.924.615	304.021.427 262.224.434	173.853.890 85.466.731 43.47	5.097
FRR(C)	#NUM!																			
Funding Gap Funding Gan Rate	-12.928.708.488 72.1%																			
Return on investment with																				
CEF CEF	NPV @ 5% 2023																			
Project investment cost	-17.928.037.896 -2.730.428.047 -1.101.178.465 -1.377.329.		-1.600.067.167 -1.741.839.025 -1.277.808.789	-545.237.109 -196.208.089 -39	2.416.177 -392.416.177 -588.624.2	66 -784.832.355 -1.177.248.532 -1.3	373.456.621 -1.569.664.710 -1.177.248.532	2			-121.824.724 -243.649.447	-521.204.029 -764.853.476 -1.008	502.924 -1.130.327.647 -1.631.422	354 -1.543.502.764 -1.022.298.735			46.269.967	-92.539.934 -138.809.902	-231.349.836 -323.889.770 -370.159	9.737 -3
CEF contribution	2.326.769.684 - 532.061.929 667.977.	87 739.636.587 699.211.747 -									-									-
Replacement cost Project O&M costs	1.343.057.576			88 327 174 86 161 596 8	6 125 704 86 029 514 86 645 3	76 86 624 700 87 066 225	88.025.517 88.522.201 137.469.078	8 106 686 910 106 440 71	2 106 277 181 106 132 31	101 106 038 862 105 906 52	105 779 358 105 688 653	105 575 298 105 202 166 106	631 884 107 739 810 108 894	445 110 073 699 195 626 148	189 128 241 190 213 302 191 506		196 033 864 197 621 654	199 245 803 200 901 042	202 174 750 203 350 937 204 57	68 570 2
Total revenues	1.490.429.836						95.202.336 96.144.579 113.285.462													
Residual value of investment	2.165.841.996																			
FNPV(C after CEF)	-10.601.938.804 -2.730.428.047 -569.116.536 -709.352.	ı4 -784.106.144 -731.490.831 -1.361.064.438	-1.600.067.167 -1.741.839.025 -1.277.808.789	-361.524.571 -16.352.091 -21	2.799.314 -212.930.457 -408.555.7	58 -604.750.426 -995.906.334 -1.1	190.228.768 -1.384.997.930 -926.493.992	2 239.386.704 239.897.866	6 240.581.469 241.309.81	188 242.104.362 242.872.94	4 121.835.041 847.010	-275.876.334 -518.401.092 -758	986.179 -877.331.334 -1.374.802	398 -1.283.162.329 -647.518.475	369.106.475 372.264.704 375.834	612 379.737.588 383.782.466	387.936.893 345.924.615	304.021.427 262.224.434	173.853.890 85.466.731 43.47	5.097
FRR(C after CEF)	0,4%																			
Keturn on investment with	NPV @ 5% 2023																			
all grants Project investment cost		81 -1.523.742.731 -1.430.702.578 -1.361.064.438							_			-521.204.029 -764.853.476 -1.008							-231.349.836 -323.889.770 -370.155	_
CEF contribution		87 739.636.587 699.211.747 -	-1800.067.167 -1.741.839.025 -1.277.808.789	-545.237.109 -196.208.089 -39	2416.177 -392.416.177 -588.624.2	06 -784.832.335 -1.177.248.332 -1.3	3/3.436.621 -1.369.664.710 -1.177.248.332	4			-121.024.724 -243.049.447	-521204.029 -764.853.476 -1.008	502.924 -1.150.327.647 -1.631.422	354 -1.543.302.764 -1.022.298.735			46.269.967	-92.539.934 -138.809.902	231.349.836 323.889.770 370.159	1.737 -3
Other public contribution	15.601.268.212 2.730.428.047 569.116.536 709.352	94 784.105.144 731.490.831 1.361.064.438	1.600.067.167 1.741.839.025 1.277.808.789	545.237.109 196.208.089 39	2.416.177 392.416.177 588.624.2	66 784.832.355 1.177.248.532 1.3	373.456.621 1.569.664.710 1.177.248.532	2			121.824.724 243.649.447	521.204.029 764.853.476 1.008	502.924 1.130.327.647 1.631.422	354 1.543.502.764 1.022.298.735			- 46.269.967	92.539.934 138.809.902	231.349.836 323.889.770 370.156	A.737 3
Replacement cost Project O&M costs	1.343.057.576		ļ	99 217 174 96 161 596 9	C 12C 20A 9C 020 C1A 9C CAC 2	26 96 624 200 92 066 226	88.025.517 88.522.201 137.469.078	9 106 696 010 106 440 71	2 106 222 101 106 122 2	101 105 029 957 105 006 57	105 770 259 105 699 653	100 575 300 105 303 155 105	621 994 107 720 910 109 904	A45 110 072 600 105 636 149	190 120 241 100 212 202 101 50	062 102.065.000 104.490.245	106 002 064 107 621 664	100 245 902 200 001 042	202 174 750 202 250 027 204 5	60 620
Total revenues	1.490.429.836			95.385.364 93.694.401 9	3.491.069 93.456.206 93.423.1	32 93.457.228 94.275.973	95.202.336 96.144.579 113.285.462	2 132.699.794 133.457.15	3 134.304.288 135.177.51	86 136.065.500 136.966.42	1 137.880.406 138.807.805	139.752.397 140.750.219 142	884.860 145.256.504 147.725	510 150.266.735 179.154.113	179.978.234 182.051.402 184.321	549 186.771.599 189.302.221	191.903.028 194.572.928	197.315.559 200.133.293	203.028.975 206.005.564 209.0f	26.265
Residual value of investment	2.165.841.996																			-
FNPV(C after all grants) FRRIC after all grants)	4.999.329.407	0 0 0 -		183.712.538 179.855.998 17	9.616.863 179.485.720 180.068.5	08 180.081.929 181.342.198 1	183.227.853 184.666.779 250.754.540	0 239.386.704 239.897.866	6 240.581.469 241.309.8	188 242.104.362 242.872.94	4 243.659.764 244.496.458	245.327.695 246.452.384 249	516.744 252.996.314 256.619	956 260.340.435 374.780.261	369.106.475 372.264.704 375.834	612 379.737.588 383.782.466	387.936.893 392.194.582	396.561.361 401.034.335	405.203.726 409.356.501 413.63	4.834
FRICE atter all grants)	INUM:																			
Keturn on private sector																				
capital (equity)	NPV @ 5% 2023																			
Private equity	NFV @ 3/8 2023																			4
Loan repayment (including interes																				-
Replacement cost																				-
Project O&M costs (net of savings Total revenues	1.343.057.576		ł	88.327.174 86.161.596 8 95.385.364 93.694.401 9	6.125.794 86.029.514 86.645.3 3.491.069 93.456.206 93.423.1	76 86.624.700 87.066.225 32 93.457.228 94.275.923	88.025.517 88.522.201 137.469.078 95.202.336 96.144.579 113.285.462	8 106.686.910 106.440.712 2 132.699.794 133.457.152	2 106.277.181 106.132.30	101 106.038.862 105.906.52 186 136.065.500 136.966.42	3 105.779.358 105.688.653 1 137.880.406 138.807.806	105.575.298 105.702.166 106 139.752.397 140.750.219 142	.631.884 107.739.810 108.894 884.860 145.256.504 147.739	.445 110.073.699 195.626.148 510 150.266.735 179.154.113	189.128.241 190.213.302 191.500 179.978.234 182.051.402 184.321	062 192.965.990 194.480.245 549 186.771.599 189.302.221	196.033.864 197.621.654 191.903.028 194.572.928	199.245.803 200.901.042 197.315.559 200.133.293	202.174.750 203.350.937 204.568 203.028.975 206.005.564 209.01	66 265
Residual value of investment	2.165.841.996		†																	
FNPV(Kp)	4.999.329.407			183.712.538 179.855.998 17	9.616.863 179.485.720 180.068.5	08 180.081.929 181.342.198 1	183.227.853 184.666.779 250.754.540	0 239.386.704 239.897.866	6 240.581.469 241.309.81	188 242.104.362 242.872.94	4 243.659.764 244.496.458	245.327.695 246.452.384 249	516.744 252.996.314 256.619	956 260.340.435 374.780.261	369.106.475 372.264.704 375.834	612 379.737.588 383.782.466	387.936.893 392.194.582	396.561.361 401.034.335	405.203.726 409.356.501 413.6?	4.834
FRR(Kp)	#NUM!	<u> </u>																		
Financial Sustainability	2023																			_
Project investment cost Sources of financing		81 -1.523.742.731 -1.430.702.578 -1.361.064.438 81 1.523.742.731 1.430.702.578 1.361.064.438									-121.824.724 -243.649.447	-521.204.029 -764.853.476 -1.008 521.204.029 764.853.476 1.008	502.924 -1.130.327.647 -1.631.422	354 -1.543.502.764 -1.022.298.735			46.269.967 46.269.967	-92.539.934 -138.809.902 03.639.034 139.809.903	-231.349.836 -323.889.770 -370.156 231.349.836 323.889.770 370.156	9.737 -3
Loan repayment (including intere		1 232742731 2430702378 1361064438	1.742.839.025 1.277.808.789	- 190.200.009 39		. 104.032.333 1.177.240.332 1.3	27.3-0.001 2.00.004.700 E177.240.532	-			243.049.447						- 46.209.967	130.009.902		
Replacement cost																				
Project O&M costs (net of saving Taxes	s transferred)			88.327.174 86.161.596 8	6.125.794 86.029.514 86.645.3	76 86.624.700 87.066.225	88.025.517 88.522.201 137.469.078	B 106.686.910 106.440.71	2 106.277.181 106.132.30	101 106.038.862 105.906.52	3 105.779.358 105.688.653	105.575.298 105.702.166 106	631.884 107.739.810 108.894	445 110.073.699 195.626.148	189.128.241 190.213.302 191.500	062 192.965.990 194.480.245	196.033.864 197.621.654	199.245.803 200.901.042	202.174.750 203.350.937 204.568	4.570 2
Total revenues				95.385.364 93.694.401 9	3.491.069 93.456.206 93.423.1	32 93.457.228 94.275.973	95.202.336 96.144.579 113.285.462	2 132.699.794 133.457.15	3 134.304.288 135.177.50	86 136.065.500 136.966.42	1 137.880.406 138.807.805	139.752.397 140.750.219 142	884.860 145.256.504 147.725	510 150.266.735 179.154.113	179.978.234 182.051.402 184.321	549 186.771.599 189.302.221	191.903.028 194.572.928	197.315.559 200.133.293	203.028.975 206.005.564 209.0F	a6.265 2
Other resources																				-
	Not cash flows	4 4		183 712 538 179 855 998 17	0.616.962 170.495.730 190.069.5	08 180 081 929 181 342 198 1	199 227 952 194 666 770 260 764 640	0 239 386 704 239 897 866	6 240 581 469 241 309 81	100 242 104 262 242 072 04	242 650 764 244 406 450	245 227 605 246 452 224 240	\$16.744 252.006.214 256.616	05C 250 240 425 274 780 761	369 106 475 372 264 204 375 834	612 379 737 588 383 782 466	387 936 893 392 194 582	396 561 361 401 034 335	405 202 726 400 256 501 412 67	44.834

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NPV Ø IN 303																																					-			-	$\overline{}$	$\overline{}$	$\overline{}$
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3288005						. MA.NO.	AK 161 096	86.126.794	86.000 E14	BE44E-176	86.424.300	87.065205	AR-COULEY		86.00.365	137 ABS 478	DOC GREATUR	BK-661712	10E 377.00	106.02.306	CHARDOS	905.496.539	105.776.308	100.488.403	MICE 246	406.70E 464	DOCUMENT.	QUESTION (DOMESTIC CONTROL OF THE CONTROL OF T	110-071-000	195,434,148	UR 128241	890.248.ND	UNLINEAG	DEL GCEANG ;	944.480.245	A011804	UKC 424-484 UKK24	245.808 200	300-904 BHZ 300 ETH 760 S	-4	.407 204.508°	AMED)
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633E8Q3NS						. W. 804	185.090.886	100400 158	204.204.841	26.69430	246.886.004	2G.465.000	265.246.846		386.476.695	NO 486 907	343.746.954	NS BONDES :	148.774.007	101.79-06	X27.390.594	110.300.60	385306400	507.964.807	346.746.626	342.329.344	8G403W	364,853,596	577.685.666	100.366.130	426.695.400	66 160733	410 210 881	66.477.428	460.899.KD4	OLBO SIG	AR.306.898	56.465.864 (57.55	326.814 (46.	ML0566 96.0340*	4 60F	,ess) 196.9°	705.114.848
2640.46.90						. 768.795.1	188,000,846 75,889,206 76,883,564 240,842,849	766275.662	307.116.063	775.04.367	764.435.379	747.304.005	80.883-00		E24-0EC-000	L088.207.006	E005.210.405	1.063.763.672	10038460	LETCHT ALS	1475.00.386	1479.321.408	L485179.829	E08141430	1390.569406	E080 30E ET3	1104046	LUGCLCS	1.045.670.200 j	L168.495.322	LATO ME ECO	1.870.420183	L#6345446	LAID 007 084	L 043.042.100	1 470 8/1 6/8 1	230.00	3.007366.007 3.096.03	534.246 2-006.	-ME EN ME 3 107 NO 768 7		_mit 3181.50	at 100 477
630.8038						. 79.794	79.961.766	93,440,004	20,777.994	100.40.00	201,80124	296,990,275	20140.00		THE MILE CO.	114-90-804	MICHAE	80.3636	S84.347.399	104.607.01	133.836	113.00.00	3843149	26.273.86	201,800,200	200,000.00	186706.070	PR.NR.dik	26.8076	265.96.662	3036361	96.006.074	MARCE PER	ME140 NE	8031136	ULBASO .		76.20-201 68.31	MI.10 %3		90.36	2 100367	, SML 800.
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Investment costs: units, index, perimeter and explanations

For the cost benefit appraisal, the base tunnel investment costs has been consolidated from the certified cost, distributed according the most recent available timeline.

The amounts in constant euros are used for the cost benefit appraisal and inserted in the input sheet of the present spreadsheet,

The investments before 2023 agregated with the 2023 values to account the full project costs.

The 2012 euros are converted in 2023 values, thanks to the TELT index of costs as follow:

The 2012 editos are converted in 2025 values, thanks to the i	TEET ITIGEX OF COSES	as follow.														
Year	2018	2019	2020	2021	2022	2023										TOT
Base tunnel Certified cost - Constant 2012 M.Euros	92	60	88	162	374	315	860	1.010	1.127	1.024	1.103	1.021	742	459	172	8.610
Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023				
TELT index of costs (1st january of each year)	100,00	101,37	101,52	100,38	99,33	101,46	102,94	105,30	106,97	108,33	116,14	125,30				
Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOT
Base tunnel Certified cost - Constant 2023 1000' euros	115	76	111	203	469	395	1.078	1.265	1.412	1.283	1.382	1.280	929	575	216	10.788
Base tunnel Certified cost - Constant 2023 1000' euros		$>\!\!<$	>	\searrow	\searrow	1.368	1.078	1.265	1.412	1.283	1.382	1.280	929	575	216	10.788

The **budget and the eligible costs** are calculated on the basis of the most recent updated cost, in current euros as follow:

The eligible costs are accounted in current euros to be consistent with the amounts of expected subsidies.

It does not consider any agregation of previous costs as they have already be funded and spent.

Year	2018	2019	2020	2021	2022	2023										TOT
Base tunnel Updated cost - Constant 2012 M.Euros	112	74	108	198	457	700	945	1.180	1.218	1.250	1.347	1.247	905	561	210	10.512
Base tunnel Updated cost - Current M.euros	118	78	115	221	555	865	1.185	1.502	1.572	1.639	1.792	1.683	1.240	779	296	13.640
Base tunnel Eligible costs - Current M.Euros		$>\!\!<$	\times	\mathbb{X}	$>\!\!<$	$>\!\!<$	1064	1336	1479	1398	$>\!\!<$	$>\!\!<$	\bigvee	$>\!\!<$	\bigvee	5.278
Share of total investment cost (% current Euros)		$>\!\!<$	$\overline{}$	$\overline{}$	$\overline{}$	$>\!\!<$	90%	89%	94%	85%	$>\!\!<$	$>\!\!<$	$>\!\!<$	$>\!\!<$	\searrow	39%
EU expected contribution - Current M.Euros		$>\!\!<$	$\overline{}$	$\overline{}$	$\overline{}$	$>\!\!<$	532	668	740	699	$>\!\!<$	$>\!\!<$	$\nearrow\!$	$>\!\!<$	\searrow	2.639
Comments on the eligible costs perimeter		>>	\times	\times	> <	> <			n and management, t accompanying meas		> <		> <	> <	><	

For the sake of clarity, eligible costs are accounted in current euros in the input sheet whereas the full economic and financial calculation is done in constant euros.

The expected European subsidies are thus estimated in current euros, whereas it should be accounted in constant euros in the cost benefit appraisal as follow:

Year		2018	2019	2020	2021	2022	2023									
Eligib	ble costs constant 2023 M.Euros	2010	2013	2020	2021	2022	2023	968	1125	1328	1095					
		\iff	\iff	\iff	\Longrightarrow	\iff	\Longrightarrow	300	1123	1328	1093	\Longrightarrow	\Longrightarrow	$ \Leftrightarrow$	>	>
EU co	ontribution constant 2023 M.Euros	\sim	\sim	\sim	<u>~</u>	\sim	~	484	563	664	547	<i>></i>				

The corresponding overestimation of financial net present value for the project sponsor with all grants would thus be around 331 M€2023.

Year	2018	2019	2020	2021	2022	2023									
Financial discount factor	\bigvee	\times	\bigvee	\bigvee	\sim	1,00	0,95	0,91	0,86	0,82	0,78	0,75	0,71	0,68	0,64
Financial net present value overestimation 2023 M.Euros	\bigvee	$>\!\!<$	\bigvee	\bigvee	\bigvee	$>\!\!<$	45,97	95,56	65,23	124,84	$>\!\!<$	\bigvee	\bigvee	\bigvee	> <