

ICER - Pro

Happy ☺ Budget Planning for Research Projects

Effective Budget Planning for European and International Research Projects

Co-funded by the European Union

ENCARE - Enhancing Capacities of UAS staff for more successful EU funded Research
Project Number: 2023-1-DE01-KA220-HED-000153936

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In this session you will learn to…

1. **Understand key elements of budgeting in EU/international projects.**
2. **Use best practices to build realistic, fundable budgets.**
3. **Identify common mistakes and how to avoid them.**



Contents of the course

Budget planning basics

Key Components in EU/International Budgets

- Staff costs
- Travel & Subsistence costs
- Equipment & Consumables
- Subcontracting & Third Parties
- Other costs
- Overheads and indirect costs
- Funding rates

Common Pitfalls & Best Practices

Hands-on training / Budget Exercise

Q&A and Wrap-up





1. Budget planning basics

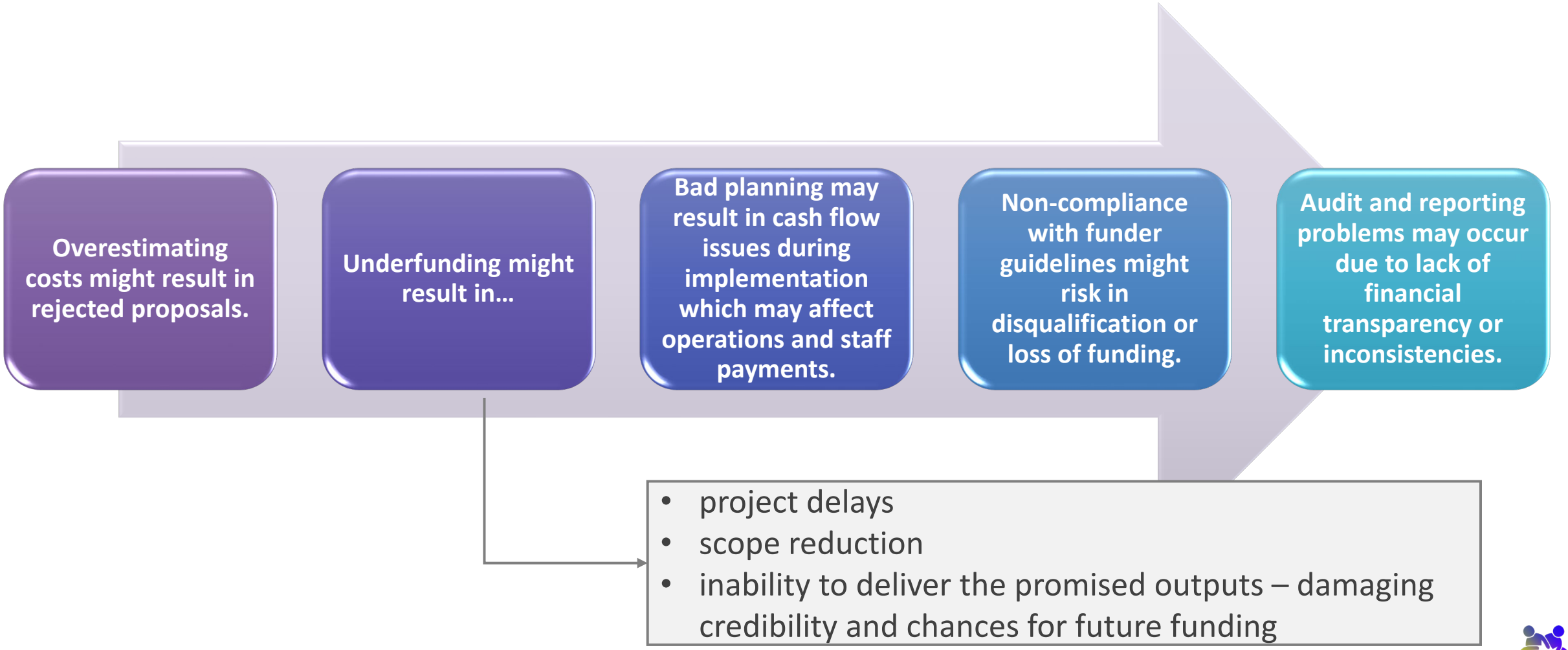
Sample project



Before you decide to apply for / or to design a project proposal, you should contact the relevant departments in your institution:

- financial department
- project management office
- grants office
- management bodies
- etc.

Why budget planning matters in grant writing?



Fundamental principles of the budget funding

Budget planning must ensure resource allocation aligns with project goals and demonstrate feasibility to funders

Budget headings must be directly linked to project activities (Work Packages, Outputs) and the timeline (Gantt chart).

Project coordinators are responsible for the budget execution of the entire consortium when reporting to the funding agency.

Grants are not for profit

Grants are just an extra help to compensate for the effort involved

The budget needs to be adjusted to the tasks that will be carried out throughout the project lifetime

Each institution should already have the necessary personnel and means to implement the project

Institutional information needs to be updated in the back office (sound financial situation, no debts, etc.)

Fundamental principles of the budget funding

Funding rates may vary according to the type of organization (universities, SMEs, NGOs, etc.) or the type of call (Erasmus+ KA2, Horizon Europe, etc.)

Concept of **eligible v ineligible costs**.

Types of costs:

- **Direct Costs**
  - personnel, travel, equipment
- **Indirect Costs**
  - overheads/flat rates

Funding Types

Real/Actual Costs

- Institutions will be financed according to the actual money spent

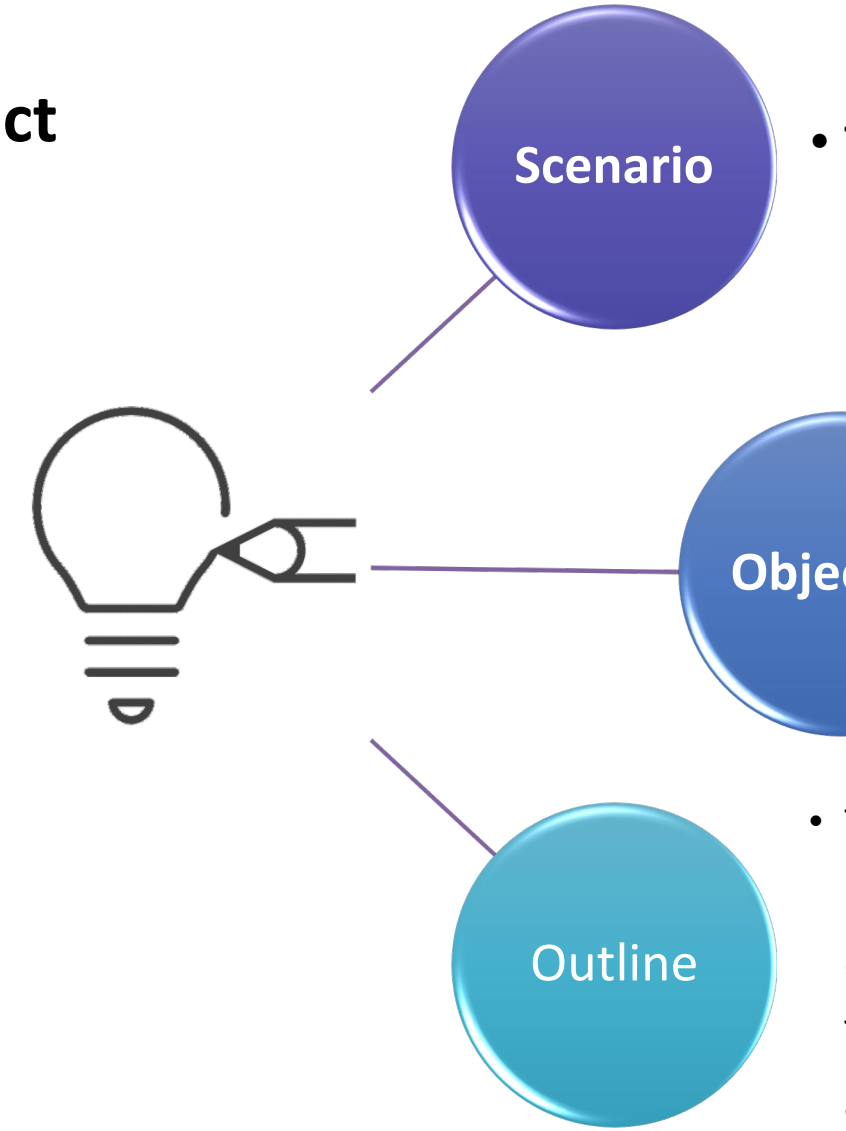
Unit Costs

- Institutions will receive a specific amount per budget item (e.g., €150/day)

Lump Sum

- Institutions will receive fix amount to implement the entire project (usually divided by WPs)

Sample project



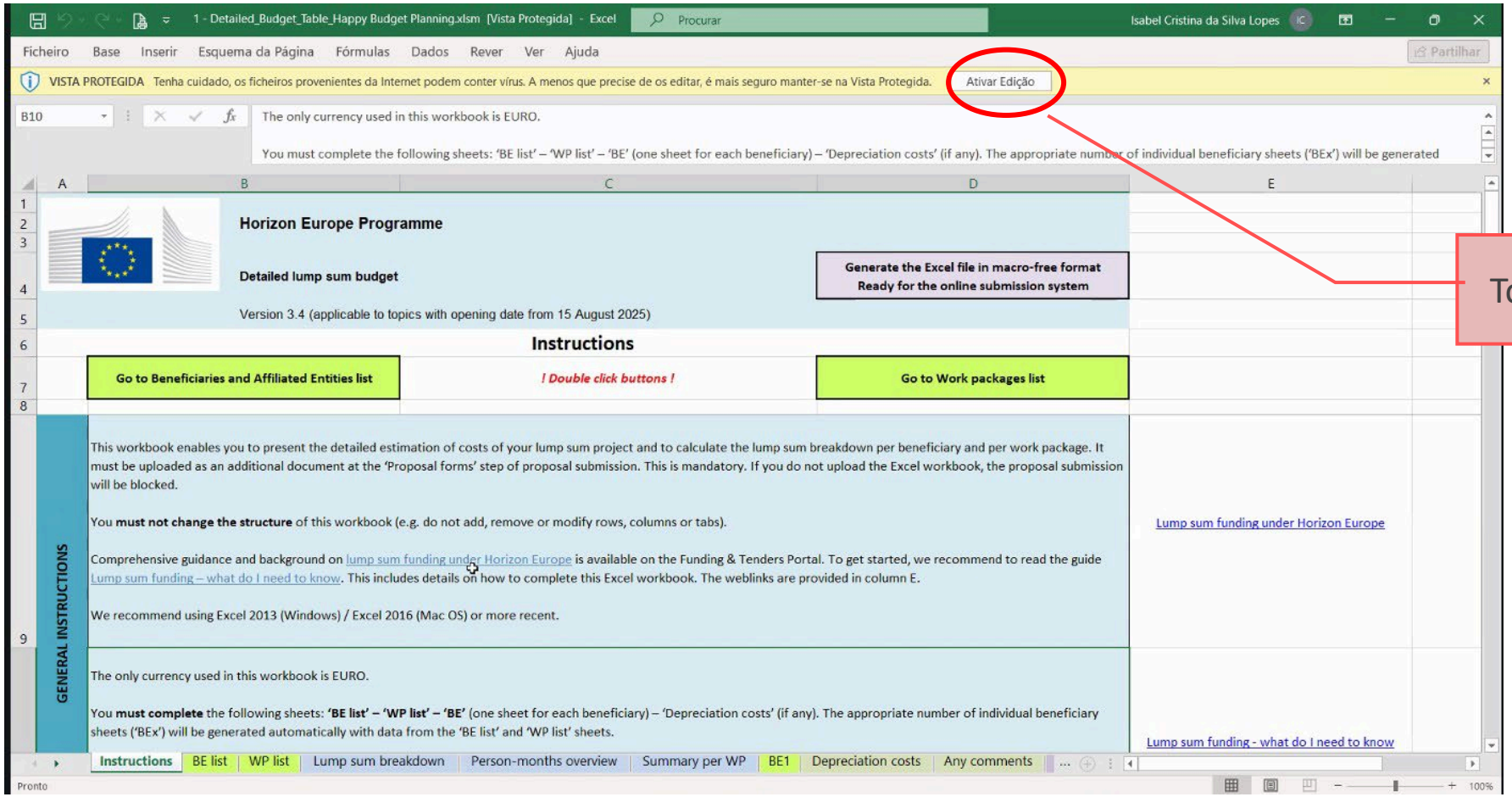
- **Terraforming Project Budget Planning**

- **To enhance the pedagogical and methodological approaches in advanced terraforming education across the Solar System by developing two new interplanetary intensive courses including open-access learning materials.**

- The project is structured into 5 Work Packages (WPs), and your organization (BE4 - Jupiter Industry) is leading **WP3: Developing and Piloting**.

Detailed budget preparation - Excel file template

- Download the Excel file template from the Funding and Tenders portal
  https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents?programmePeriod=2021-2027&frameworkProgramme=43353764
- Activate editing, unlock the file, and allow macros



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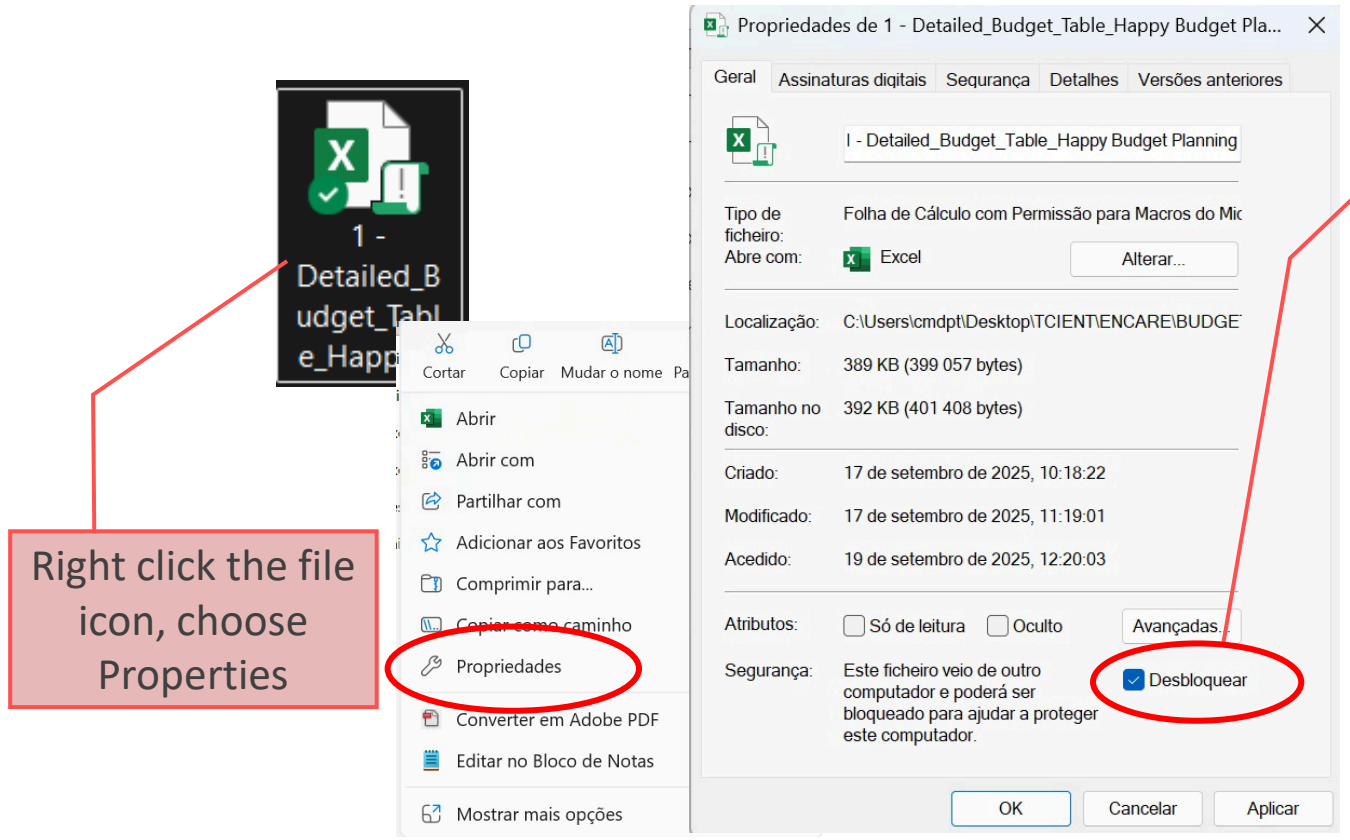
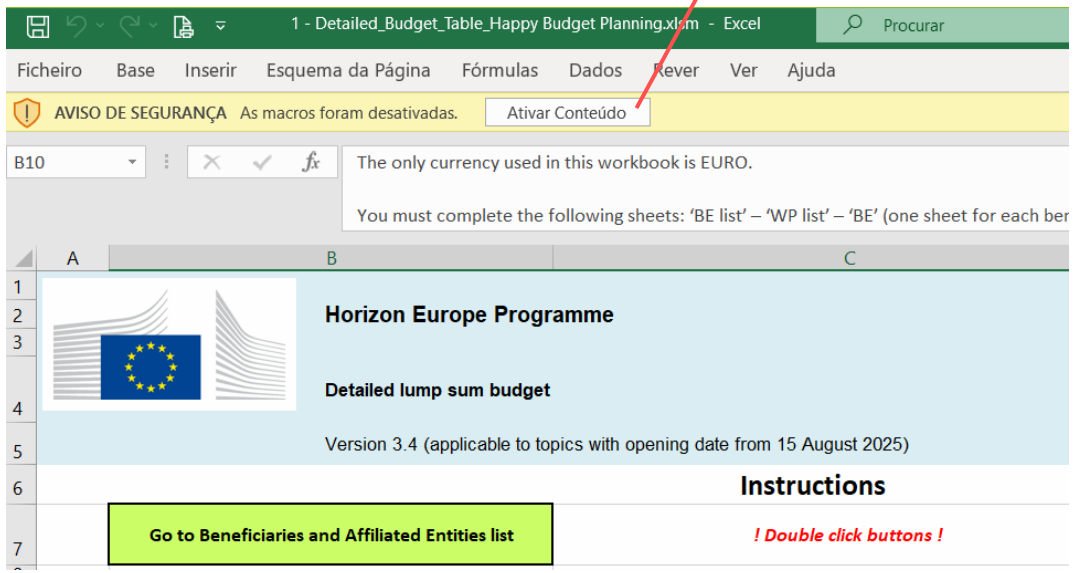


Right click the file icon, choose Properties

Tick 'Unblock' to allow macros

Click to allow macros

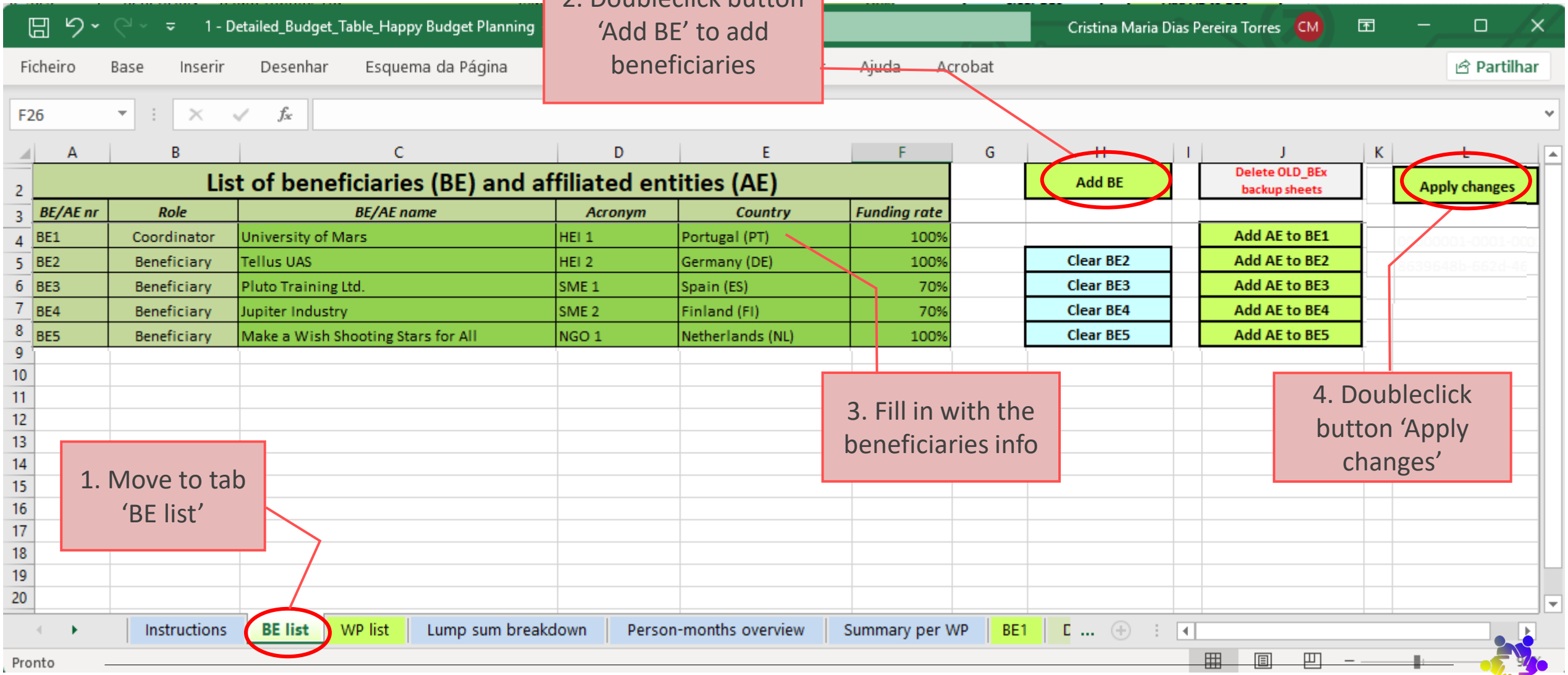


Sample project

First Task:

Budget template (Excel file 1)

2. Doubleclick button 'Add BE' to add beneficiaries



3. Fill in with the beneficiaries info

4. Doubleclick button 'Apply changes'

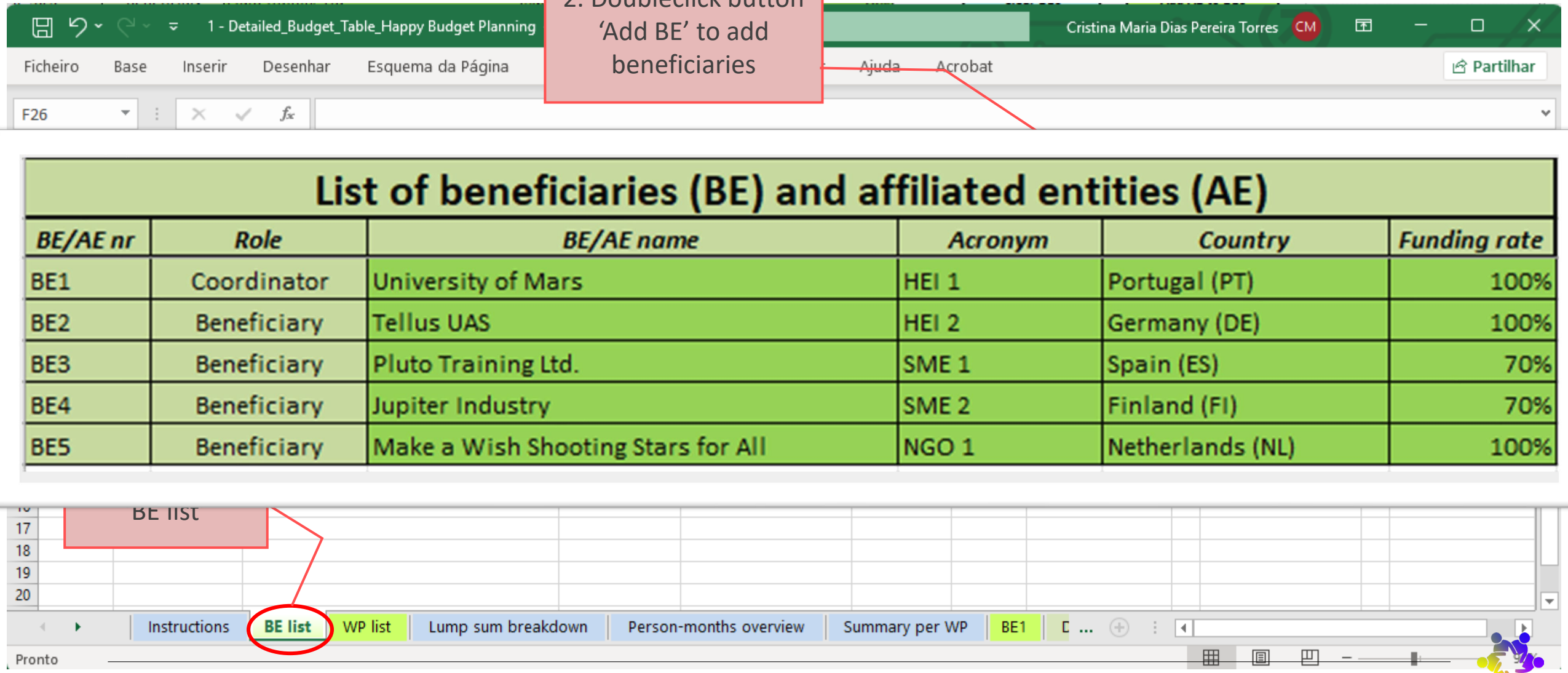
1. Move to tab 'BE list'

Sample project

First Task:

Budget template (Excel file 1)

2. Doubleclick button ‘Add BE’ to add beneficiaries



List of beneficiaries (BE) and affiliated entities (AE)

BE/AE nr	*Role*	*BE/AE name*	*Acronym*	*Country*	*Funding rate*
BE1	Coordinator	University of Mars	HEI 1	Portugal (PT)	100%
BE2	Beneficiary	Tellus UAS	HEI 2	Germany (DE)	100%
BE3	Beneficiary	Pluto Training Ltd.	SME 1	Spain (ES)	70%
BE4	Beneficiary	Jupiter Industry	SME 2	Finland (FI)	70%
BE5	Beneficiary	Make a Wish Shooting Stars for All	NGO 1	Netherlands (NL)	100%

Sample project

First Task:

2. Double-click button ‘Add WP’ to add workpackages

Budget template (Excel file 1)

	A	B	C	D	E	F
2	**List of Work Packages**			Add WP	! Double click buttons !	Apply changes
3	***WP number***	***WP name***				
4	WP1	Project Management				
5	WP2	Synergy Framework			Clear WP2	
6	WP3	Development and Piloting			Clear WP3	
7	WP4	Training SME staff and VET students			Clear WP4	
8	WP5	Dissemination & Impact			Clear WP5	
9						
10						
11						
12						

3. Insert the workpackage name

4. Double-click button ‘Apply changes’

1. Move to tab ‘WP list’

Instructions | BE list | WP list | Lump sum breakdown | Person-months overview | Summary per WP | BE1 | D ...



2. Key Components in EU/International Budgets

Funding Categories

- Staff costs
- Travel and Subsistence Costs
- Equipment & Consumables
- Subcontracting & Third parties
- Dissemination
- Management and implementation
- Other costs
- Overhead/Indirect costs

Staff Costs



Largest parcel of the budget and the most desired by the institutions



Calculation based on person-months, salary, employer charges



Different countries have different salaries

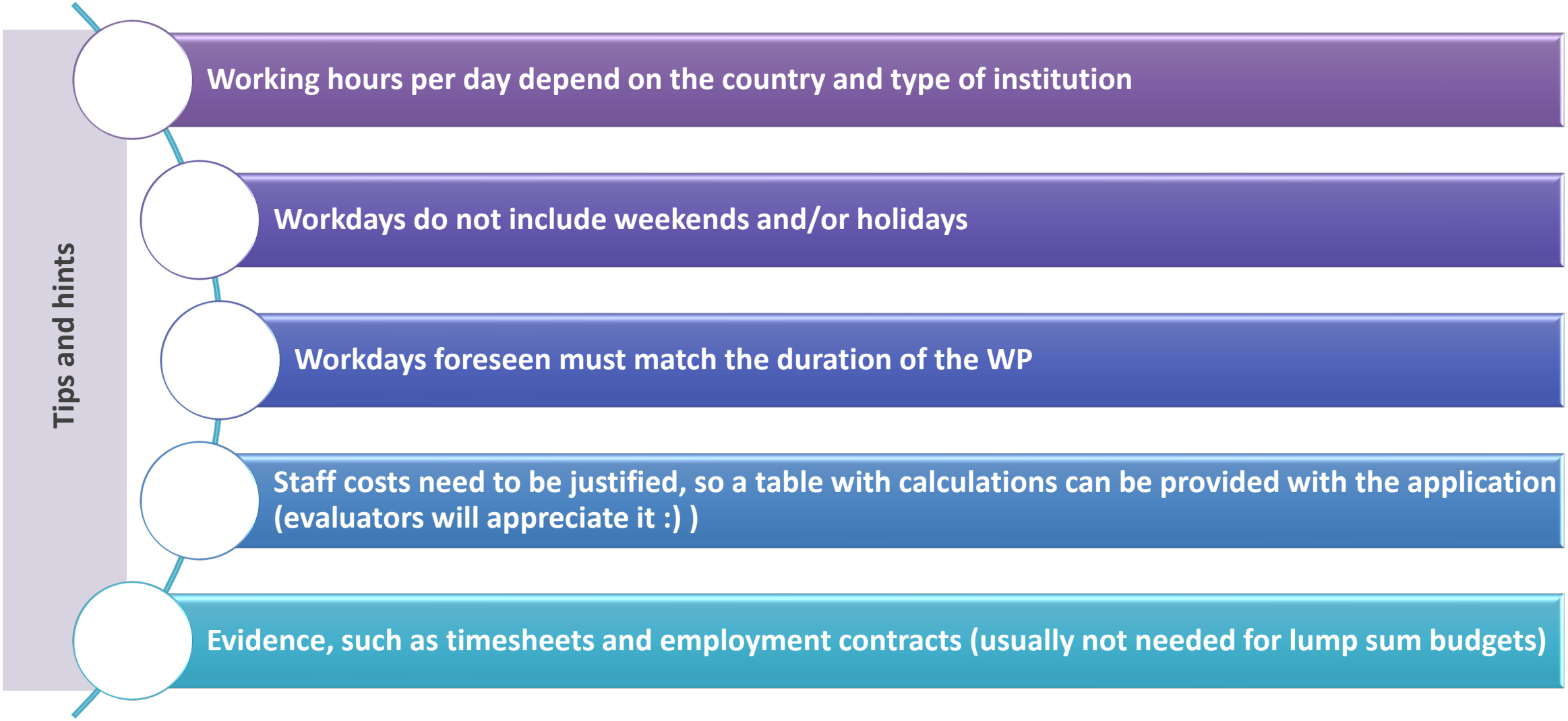


The intensity of work of each partner should be reflected on the staff costs

Examples:

- Computing number of person-month or using EU, computing labour cost per hour or day
- Staff costs calculation table

Staff Costs


Tips and hints
Working hours per day depend on the country and type of institution
Workdays do not include weekends and/or holidays
Workdays foreseen must match the duration of the WP
Staff costs need to be justified, so a table with calculations can be provided with the application (evaluators will appreciate it :))
Evidence, such as timesheets and employment contracts (usually not needed for lump sum budgets)

Staff Costs Calculation Table

Staff Costs

Staff Name	Start with	Days / Year	365	Staff Name	Start with	Days / Year	365	Staff Name	Start with	Days / Year	365
	-	Saturdays / Sundays	104		-	Saturdays / Sundays	104		-	Saturdays / Sundays	104
	-	Holidays	10		-	Holidays	10		-	Holidays	10
	=	Contractual work days / year	251		=	Contractual work days / year	251		=	Contractual work days / year	251
	-	Work days lost through number of legal days of holiday/vacation			-	Work days lost through number of legal days of holiday/vacation			-	Work days lost through number of legal days of holiday/vacation	
	=	Net work days / year	251		=	Net work days year	251		=	Net work days year	251
	x	Average work hours / day	7		x	Average work hours / day	7		x	Average work hours / day	7
	=	Net work hours / year	1757		=	Net work hours year	1757		=	Net work hours year	1757
	=	**Person-month ratio**	**20,92**		=	**Person-month ratio**	**20,92**		=	**Person-month ratio**	**20,92**

Calculate actual daily rates per staff members

% Contract	100%	Staff Name	% Contract	100%	Staff Name	% Contract	100%	Staff Name
Start with	gross salary / month	€ -	Start with	gross salary / month		Start with	gross salary / month	
then add	cost for associated employer outlay	€ -	then add	cost for associated employer outlay		then add	cost for associated employer outlay	
Sum:	Entire labor costs / month	€ -	Sum:	Entire labor costs / month	€ -	Sum:	Entire labor costs / month	€ -
Actual work days / month	net work days per year / 12 months	20,92	Actual work days / month	net work days per year / 12 months	20,92	Actual work days / month	net work days per year / 12 months	20,92
Actual labour costs / work day	Entire labor costs / day	€ -	Actual labour costs / work day	Entire labor costs / day	€ -	Actual labour costs / work day	Entire labor costs / day	€ -
Actual labour costs / work hour	Entire labor costs / hour	€ -	Actual labour costs / work hour	Entire labor costs / hour	€ -	Actual labour costs / work hour	Entire labor costs / hour	€ -

1. Confirm the number of working days (Blue cells fill in automatically)

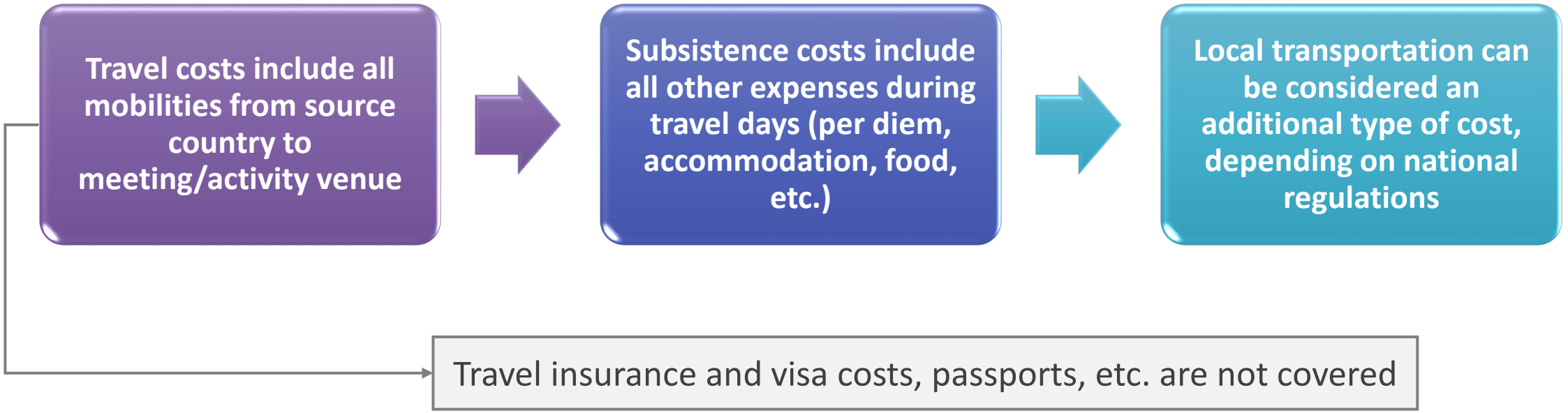
2. Fill in cell with the gross salary/month of the staff member

3. Subtract social security costs, etc.

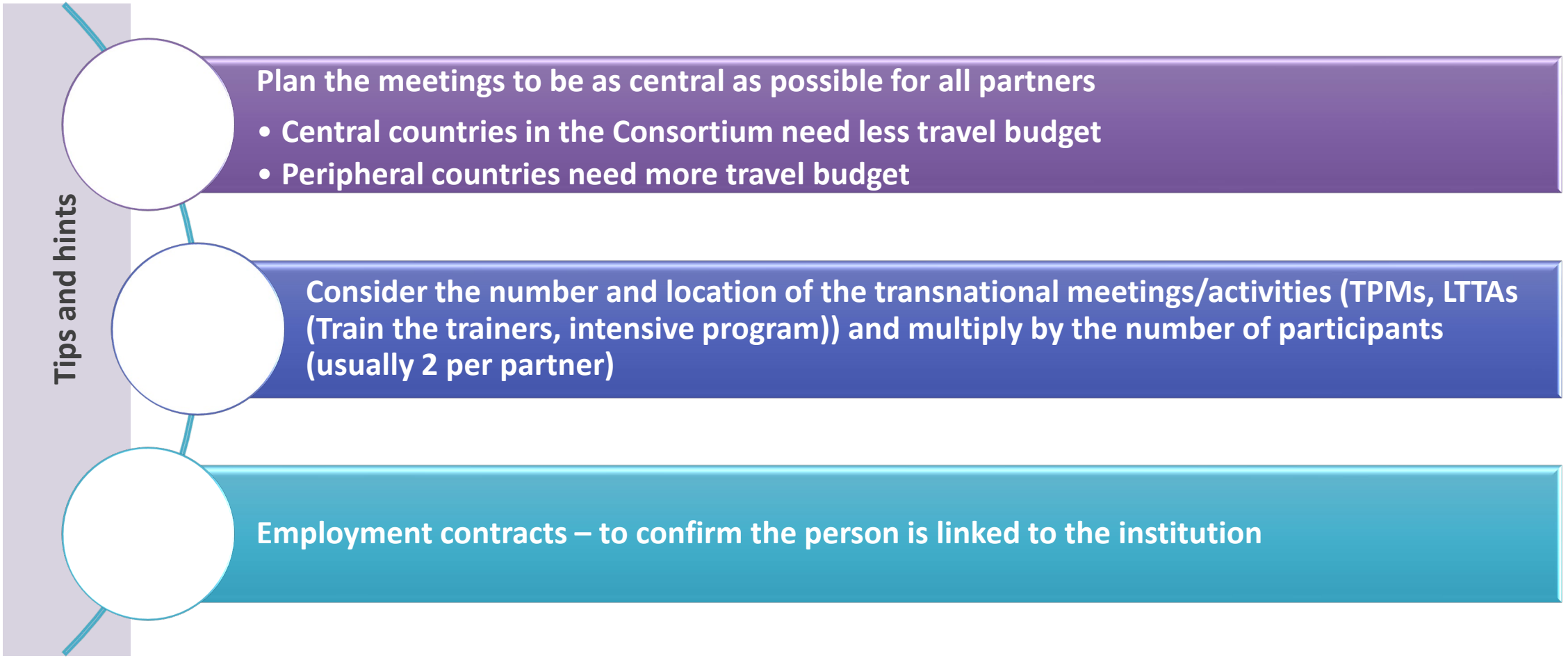
4. Person-month ratio (227/12=18,9)

5. Cost per day €5.836,8/20,92 = €279,01

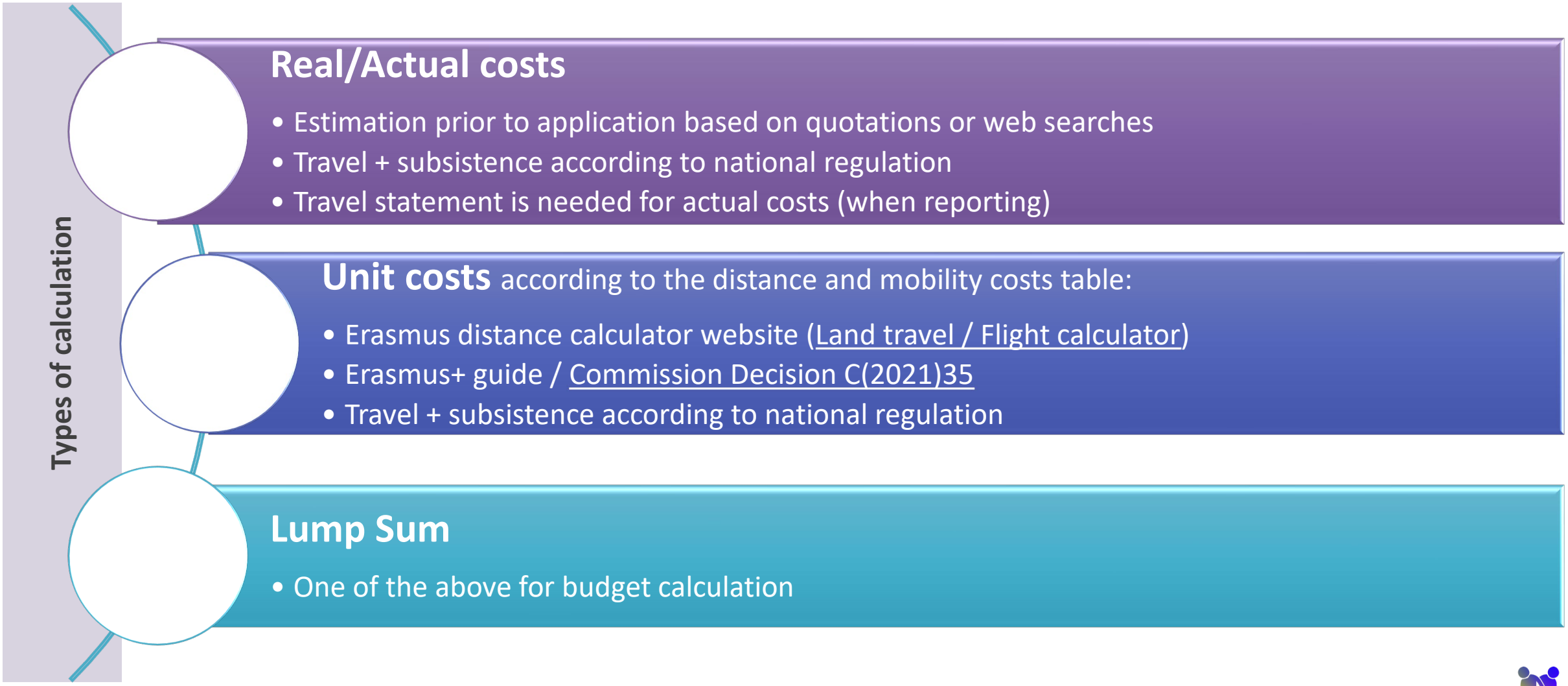
Travel and Subsistence Costs



Travel and Subsistence Costs



Travel and Subsistence Costs

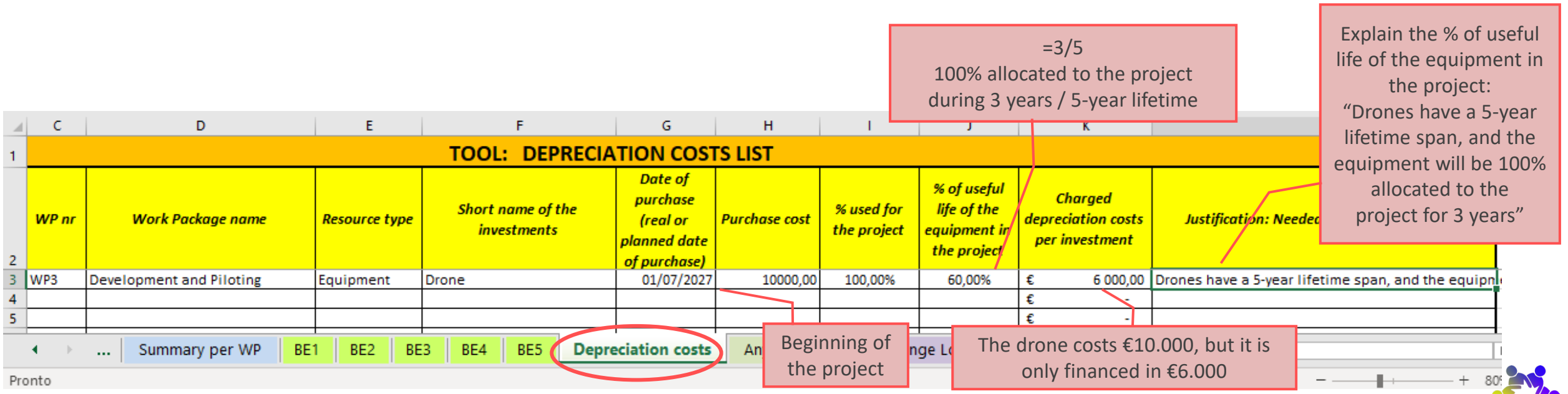


First Task:

Budget template (Excel file 1)

Equipment & Consumables Costs

- Linked to Technology Readiness Level of project
- Must consider depreciation period – when in doubt, consult with your financial officer
- Based on estimations and price tables available online (that the evaluators can check)



TOOL: DEPRECIATION COSTS LIST

WP nr	Work Package name	Resource type	Short name of the investments	Date of purchase (real or planned date of purchase)	Purchase cost	% used for the project	% of useful life of the equipment in the project	Charged depreciation costs per investment	Justification: Needed
WP3	Development and Piloting	Equipment	Drone	01/07/2027	10000,00	100,00%	60,00%	€ 6 000,00	Drones have a 5-year lifetime span, and the equipn
								€ -	
								€ -	

Summary per WP | BE1 | BE2 | BE3 | BE4 | BE5 | Depreciation costs

Pronto

=3/5
100% allocated to the project during 3 years / 5-year lifetime

Explain the % of useful life of the equipment in the project:
"Drones have a 5-year lifetime span, and the equipment will be 100% allocated to the project for 3 years"

Beginning of the project

The drone costs €10.000, but it is only financed in €6.000

Equipment & Consumables Costs

Tips

- Due to depreciation costs, and in order to allocate the maximum possible value of the equipment to the project financing, the equipment should be purchased at the very beginning of the project.

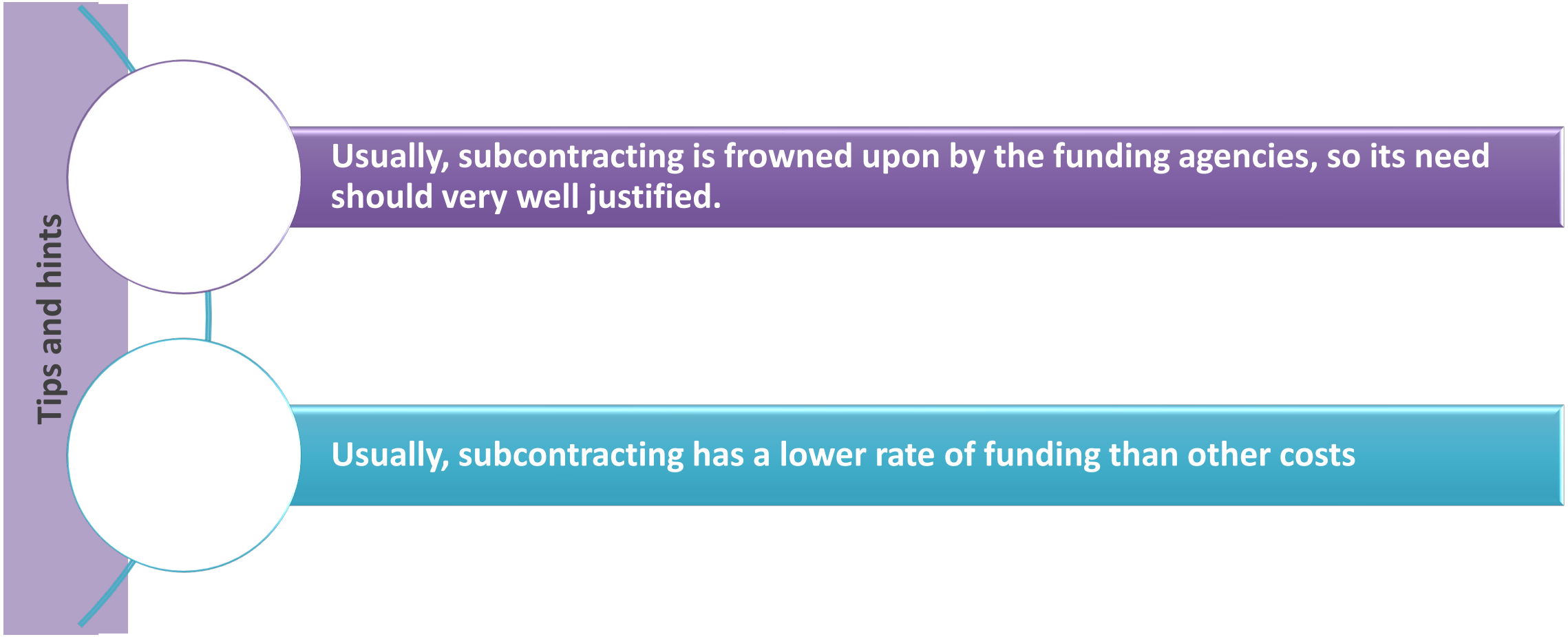
Eligibility of Costs

- Computers – usually not eligible, only for very specific purposes
- Purchase of Software
- Lab materials
- Check if call allows for specific and unusual needs (e.g., to build a water tank to simulate specific underwater environments…)

Subcontracting & Third Parties costs

- Subjected to European Tender Rules
- Subjected to National regulations as well
- Depending on the final cost, several quotations and tenders may be needed/required
- Common difficulties include procurement procedures (documentation of selection, proof of value for money, etc.)

Subcontracting & Third Parties costs

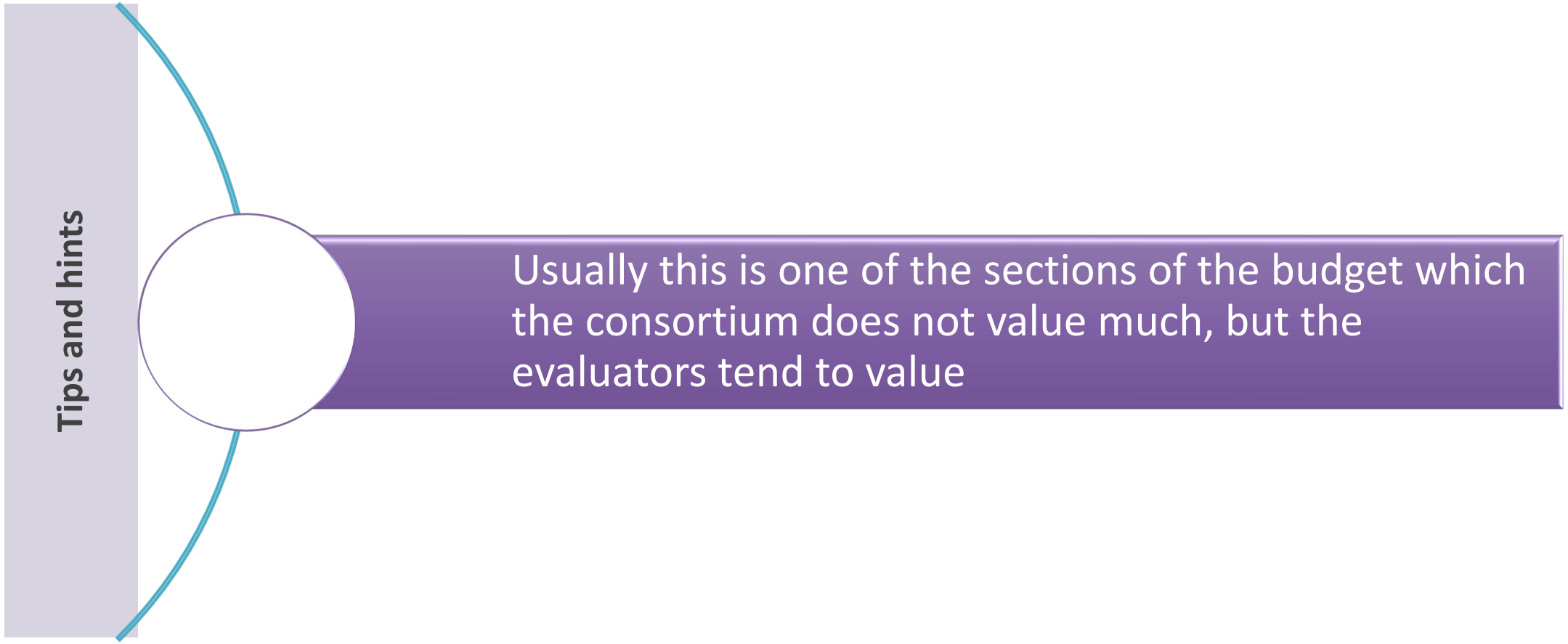


Dissemination Costs



- Conference fees, article processing charges, trade fairs
- Advertising in Google and social networks
- Printing posters, flyers, merchandising, etc.
- Webpage domain, webdesign, etc.
- Multiplier Events
- Meetings for developing a spin off project, or exploitation of results

Dissemination Costs



Other costs


Linguistic support (including sign language interpreters)
Translation services
Printing materials
Catering (coffee breaks, lunches for meetings and events)
Etc.

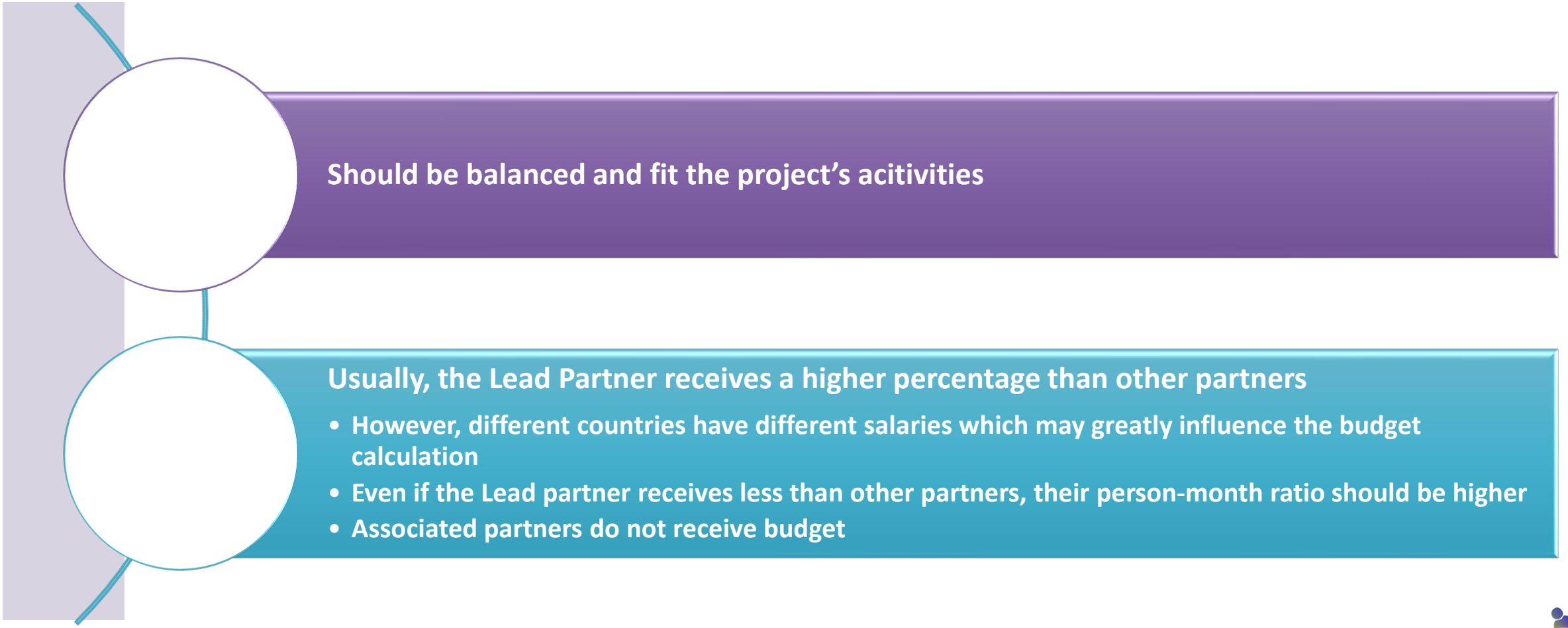
Overheads and Indirect costs

- No evidence needed for indirect costs (usually considered operational costs)
- Mandatory category in Real/Actual costs projects
- Usually a percentage of the overall budget
- Partners receive indirect costs in the exact proportion of the budget claimed/reported
- Not all funding programmes foresee this category



3. Common pitfalls and best practices

Distribution of the costs within the consortium



Common pitfalls and best practices

Pitfalls

- Underestimating a specific cost item (travel, staff, equipment, etc.).
- Misunderstanding ineligible costs (e.g., VAT).
- Ignoring exchange rate risks in international partnerships

Best practices

- Align budget closely with the project narrative.
- Early coordination with partners on budget responsibilities.
- Keep buffer/margin for contingencies where allowed.
- Documentation and audit readiness from the start.



4. Budget exercise

Sample project

Budget work-in-progress (Excel file 2)

Second Task (15 minutes):

You must **estimate a draft budget** for your institution's contribution to WP3.

Given Information:

- **Project Duration**: 3 years
- **Your Organization Type**: SME
- **Staff Involved**:
  - 1 Senior Scientist (full-time on project for 12 months)
  - 1 Lab Technician (50% FTE for 18 months)
- **Average Staff Costs**:
  - Senior Scientist: €5.000/month (gross salary incl. employer costs)
  - Lab Tech: €3.000/month (gross salary incl. employer costs)

Other Costs:

- Travel to 3 project meetings in Europe (2 people x 3 trips)
  - Estimated €600 per trip/person
- Lab consumables for field trials: €10.000
- Shipping samples to partners (Europe/Asia): €3.000
- Overheads: 25% flat rate on eligible direct costs

Instructions for Participants:

- Calculate **Staff costs** (in person-months and EUR).
- Estimate **travel**, **other direct costs**, and **indirect costs**.
- Determine your **total budget request**.

Sample project

Budget work-in-progress (Excel file 2)

	A	B	C	D
1	**Beneficiary: BE4 - BUDGET SHEET**		View Summary	
2		Jupiter Industry		
3	COST CATEGORY	ITEMS	COST PER ITEM	BE TOTAL COSTS
85				
86				
87	COSTS WORK PACKAGE 3: Development and Piloting			
88				
89	A. DIRECT PERSONNEL COSTS			
90	A.1 Employees (or equivalent)			
91	SENIOR SCIENTISTS (or equivalent in the private sector)	12,0	5000	60000,00
92	JUNIOR SCIENTISTS (or equivalent in the private sector)			0,00
93	TECHNICAL PERSONNEL (or equivalent in the private sector)	=18*50%	3000	27000,00
94	ADMINISTRATIVE PERSONNEL (or equivalent in the private sector)			0,00
95	OTHERS			0,00
96	A.2 Natural Persons under direct contract			0,00
97	A.3 Seconded Persons			0,00
98	A.4 SME owners and natural person beneficiaries		10319,57	0,00
99	B. DIRECT SUBCONTRACTING COSTS			
100				0,00
101	C. DIRECT PURCHASE COSTS			
102	C.1 Travel and subsistence			0,00
103	C.2 Equipment (complete 'Depreciation costs' sheet)			
104	*Equipment*			0,00
105	*Infrastructure*			0,00
106	*Other assets*			0,00
107	C.3 Other goods, works and services			
108	*Consumables*			0,00
109	*Services for meetings, seminars*			0,00
110	*Services for dissemination activities (including website)*			0,00
111	*Publication fees*			0,00
112	*Other (shipment, insurance, translation, etc.)*			0,00
113	D. OTHER COST CATEGORIES			
114	D.1 Financial support to third parties (if applicable in the topic specific conditions)			0,00
115	D.2 Internally invoiced goods and services			0,00
116	D.3 Transnational access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions)			0,00
117	D.4 Virtual access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions)			0,00
118	D.5 PCP/PPI procurement costs (if mentioned as eligible in the topic specific conditions)			0,00
119				
120	TOTAL DIRECT PERSONNEL COSTS AND PURCHASE COSTS (A+C)			0,00
121	TOTAL DIRECT COSTS (A+B+C+D)			0,00
122				
123	E. INDIRECT COSTS (25% * (A+C))			0,00

... | WP list | Lump sum breakdown | Person-months overview | Summary per WP | BE1 | BE2 | BE3 | BE4 | BE5

Go to: BE4 tab
line 87
WP3

Senior Scientist
Items = 12 months
Cost per item: €5.000

Lab Technician:
Technical Per.
Items=50%*18months
= 9 months
Cost per item: €3.000

Sample project

Budget work-in-progress (Excel file 2)

	A	B	C	D
1	**Beneficiary: BE4 - BUDGET SHEET**		View Summary	
2		Jupiter Industry		
3	COST CATEGORY	ITEMS	COST PER ITEM	BE TOTAL COSTS
85				
86				
87	COSTS WORK PACKAGE 3: Development and Piloting			
88				
89	A. DIRECT PERSONNEL COSTS			
90	A.1 Employees (or equivalent)			
91	SENIOR SCIENTISTS (or equivalent in the private sector)	12,0	5000	60000,00
92	JUNIOR SCIENTISTS (or equivalent in the private sector)			0,00
93	TECHNICAL PERSONNEL (or equivalent in the private sector)	9,0	3000	27000,00
94	ADMINISTRATIVE PERSONNEL (or equivalent in the private sector)			0,00
95	OTHERS			0,00
96	A.2 Natural Persons under direct contract			0,00
97	A.3 Seconded Persons			0,00
98	A.4 SME owners and natural person beneficiaries		10319,57	0,00
99	B. DIRECT SUBCONTRACTING COSTS			
100				0,00
101	C. DIRECT PURCHASE COSTS			
102	C.1 Travel and subsistence	6,0	600	3600,00
103	C.2 Equipment (complete 'Depreciation costs' sheet)			
104	*Equipment*			0,00
105	*Infrastructure*			0,00
106	*Other assets*			0,00
107	C.3 Other goods, works and services			
108	*Consumables*	1,0	10000	10000,00
109	*Services for meetings, seminars*			0,00
110	*Services for dissemination activities (including website)*			0,00
111	*Publication fees*			0,00
112	*Other (shipment, insurance, translation, etc.)*	1,0	3000	3000,00
113	D. OTHER COST CATEGORIES			
114	D.1 Financial support to third parties (if applicable in the topic specific conditions)			0,00
115	D.2 Internally invoiced goods and services			0,00
116	D.3 Transnational access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions)			0,00
117	D.4 Virtual access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions)			0,00
118	D.5 PCP/PPI procurement costs (if mentioned as eligible in the topic specific conditions)			0,00
119				
120	TOTAL DIRECT PERSONNEL COSTS AND PURCHASE COSTS (A+C)			103600,00
121	TOTAL DIRECT COSTS (A+B+C+D)			103600,00
122				
123	E. INDIRECT COSTS (25% * (A+C))			25900,00

WP list | Lump sum breakdown | Person-months overview | Summary per WP | BE1 | BE2 | BE3 | BE4 | BE5

3 project meetings:
= 2 people * 3 trips
Cost per trip/person: €600

Lab consumables for field trials: €10.000

Shipping samples to partners (Europe/Asia) €3.000

Overheads: 25% flat rate on eligible direct costs

Sample project

Budget work-in-progress (Excel file 2)

Note that we have filled in the budget for the other WP and beneficiaries in an analogous way.

	A	B	C	D	E	F	G	H
1	TOTAL PERSON-MONTHS							
2	BENEFICIARIES \ WORK PACKAGES	WP1 Project Management	WP2 Synergy Framework	WP3 Development and Piloting	WP4 Training SME staff and VET students	WP5 Dissemination & Impact	Total	Pct %
3	BE1: University of Mars	14,40	15,60	15,60	15,60	1,80	63,00	21,92%
4	BE2: Tellus UAS	7,20	29,40	12,00	15,60	1,80	66,00	22,96%
5	BE3: Pluto Training Ltd.	7,20	15,60	15,60	24,00	1,80	64,20	22,34%
6	BE4: Jupiter Industry	7,20	3,60	21,00	12,00	1,80	45,60	15,87%
7	BE5: Make a Wish Shooting Stars for All	7,20	12,00	12,00	12,00	5,40	48,60	16,91%
8	Total:	43,20	76,20	76,20	79,20	12,60	287,40	100,00%
9	Percentage:	15,03%	26,51%	26,51%	27,56%	4,38%	100,00%	
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

... | WP list | Lump sum breakdown | Person-months overview | Summary per WP | BE1 | BE2 | BE3 | BE4 | BE5

7,20 person-months means: 2 person at 10% FTE during 36 months

In the sheet 'Person-months overview' you can check the personnel allocated per beneficiary and per WP

12 months (senior scientist) + 9 months (technical personnel) = 21 persons-month

Try to allocate more personnel to the WP for which the beneficiary is responsible

Try to allocate a higher % to the project leader

Sample project

Budget work-in-progress (Excel file 2)

	A	B	C	D	E	F	G	H
1	ESTIMATED BREAKDOWN OF THE LUMP SUM							
2	BENEFICIARIES \ WORK PACKAGES	WP1 Project Management	WP2 Synergy Framework	WP3 Development and Piloting	WP4 Training SME staff and VET students	WP5 Dissemination & Impact	Total	Pct %
3	BE1: University of Mars	87 500,00	60 000,00	60 000,00	60 000,00	18 750,00	286 250,00	25,29%
4	BE2: Tellus UAS	37 500,00	125 000,00	37 500,00	60 000,00	18 750,00	278 750,00	24,63%
5	BE3: Pluto Training Ltd.	26 250,00	42 000,00	42 000,00	72 625,00	13 125,00	196 000,00	17,32%
6	BE4: Jupiter Industry	26 250,00	15 750,00	90 650,00	26 250,00	13 125,00	172 025,00	15,20%
7	BE5: Make a Wish Shooting Stars for All	37 500,00	37 500,00	37 500,00	37 500,00	48 750,00	198 750,00	17,56%
8	Total:	215 000,00	280 250,00	267 650,00	256 375,00	112 500,00	1 131 775,00	100,00%
9	Percentage:	19,00%	24,76%	23,65%	22,65%	9,94%	100,00%	
10								
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BE list | WP list | Lump sum breakdown | Person-months overview | Summary per WP | BE1 | BE2 | BE3 | BE4

In the tab 'Lump sum breakdown' you can check costs per beneficiary and per WP

Challenge to discuss:

How to cut from the proposed budget so that the total budget does not exceed €1M?



5. Q&A and wrap up


Questions?

Thank You!

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Faculty of Business, Technical University of Porto

1st of October 2026

ENCARE - Enhancing Capacities of UAS staff for more successful EU funded Research
Project Number: 2023-1-DE01-KA220-HED-000153936

ICER - Pro

Please check the following tools for further information:

CARPE Website
(general project information & training material)

LinkedIn
(news & up-dates)

Co-funded by the European Union

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