



TAKING
COOPERATION
FORWARD



Radom, 10 October 2018

PROJECT MEETING



PRIORITIZING ACTIONS/choose ALTERNATIVES for the strategic elaboration of the action plan SAP



Greenersites | Veneto Region | Experts: Francesca Borga, Raffaella Licoe

Scope of the presentation

- The AHP as Decision Support System to support the elaboration of the SAP for the FUA/pilot sites
- Simulation of the process that should be implemented by each partners



SAP structure

1. Introduction

2. The context:

- description of the FUA and the pilot area
- description of the alternative actions (use template already shared by the partnership, but simply summarise the action)

3. The decisional process developed

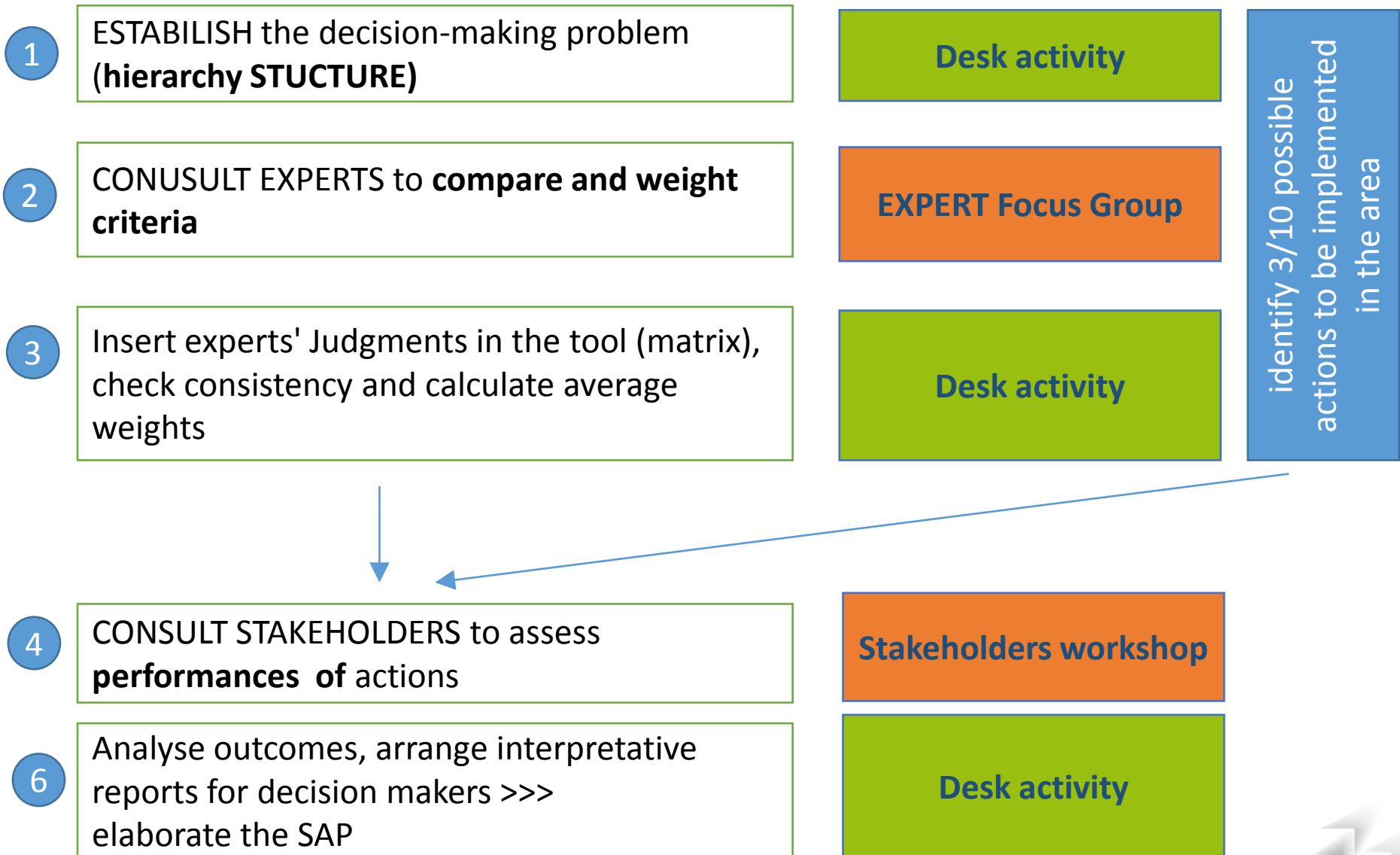
- The focus group, the stakeholders workshop

4. Analysis of the outcomes

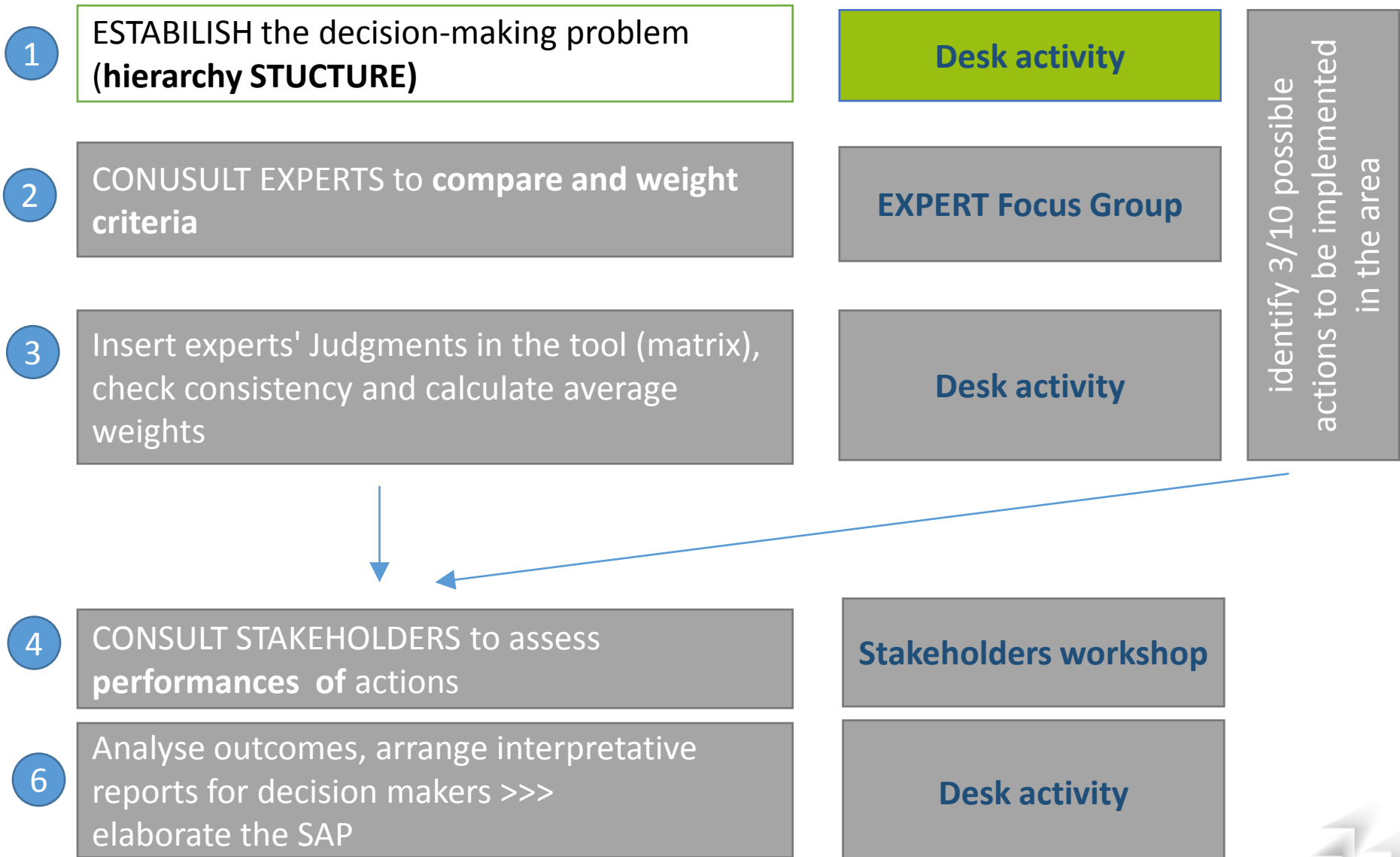
5. Detailed description of selected action(s)



AHP as participated process



AHP as participated process



The hierarchic decisional structure

SAP GOAL

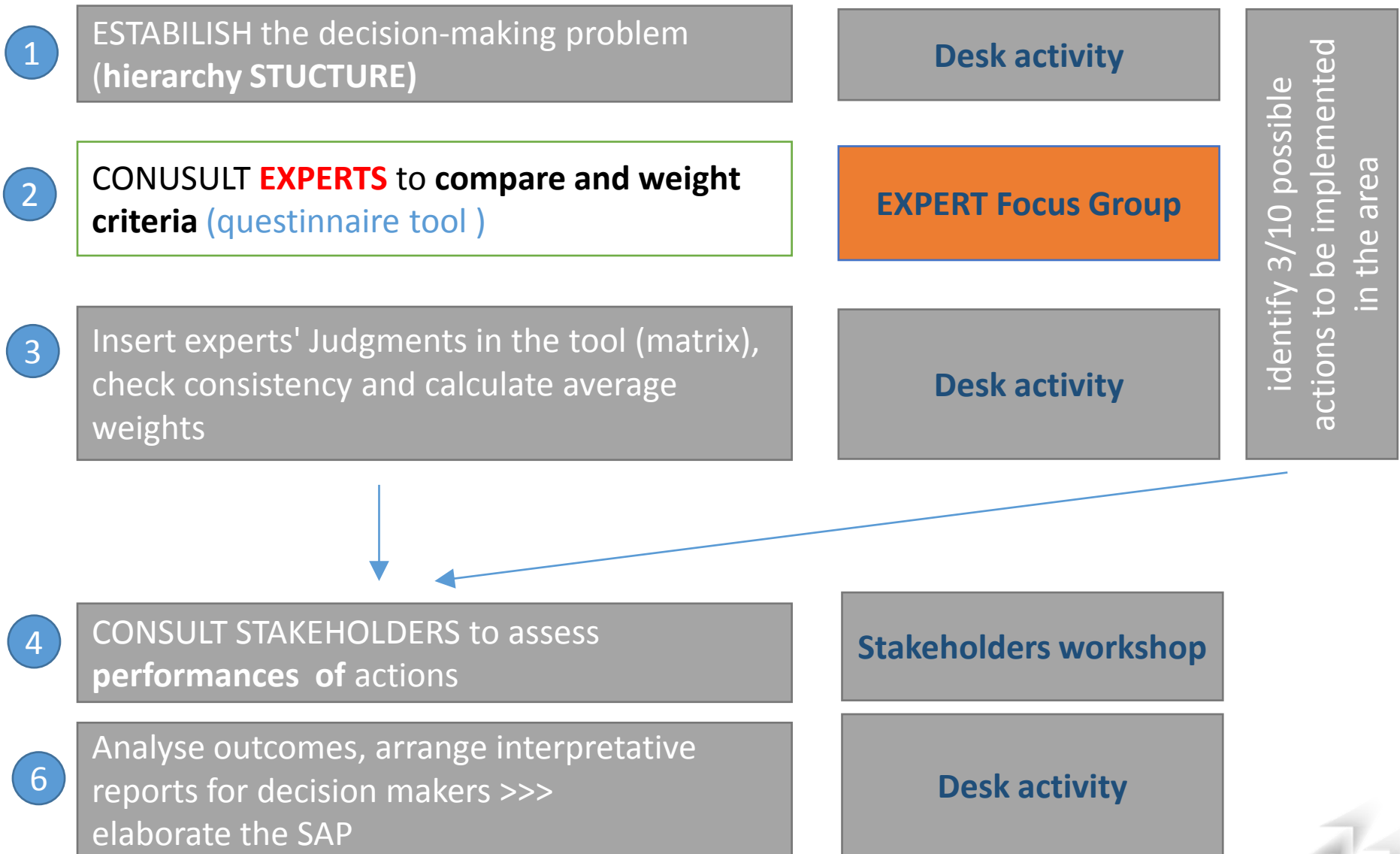
Prioritizing effective actions (choosing among alternative actions) to promote the environmental rehabilitation of the brownfield sites and to make the Functional Urban Areas healthier & more liveable places"

Criteria 1	Criteria 2	Criteria 3	Criteria 4
C1 Environmental Sustainability	C2 Socio-Cultural Sustainability	C3 Economic Sustainability	C4 Technical Sustainability
subcriteria 1.1	subcriteria 2.1	subcriteria 3.1	subcriteria 4.1
1.1 Impacts on Air quality	2.1 Human health and safety	3.1 Impacts on the attractiveness of the place	4.1 Use of eco-compatible materials and technologies
subcriteria 1.2	subcriteria 2.2	subcriteria 3.2	subcriteria 4.2
1.2 Impacts on Soil and underground quality	2.2 Ethic and equity	3.2 Value for public organizations	4.2 Flexibility of the project
subcriteria 1.3	subcriteria 2.3	subcriteria 3.3	subcriteria 4.3
1.3 Impacts on Water quality	2.3 Community involvement	3.3 Economic externalities	4.3 Minimisation of waste
subcriteria 1.4	subcriteria 2.4	subcriteria 3.4	subcriteria 4.4
1.4 Impacts on Ecosystems preservation	2.4 Identity preservation	3.4 Employment	4.4 Life spam

Criteria 5
C5 Additional Criteria of feasibility to be considered at the end of the process
subcriteria 5.1
5.1 Availability of necessary resources
subcriteria 5.2
5.2 compliance with policy, strategies and legislative constrains
subcriteria 5.3
5.3 Timing of execution / finalization
subcriteria 5.4
5.4 Technological risk



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The questionnaire structure

instruction:

purpose 1 compare criteria to determine weights

1 Answer: Is the criteria on the left more or less important then criteria on the right (same line) to achieve the general scope of the PLAN?

2 Rate: Explicit how many times the criteria on the left is more or less important then criteria on the right (same line)?

NB use YELLOW color to mark the cell corresponding to YOUR judgment or if you are working on paper mark your choice

purpose 2 compare sub- criteria to determine related weights

repeat the same operation to compare subcriteria among each other

1 Answer: Is the sub-criteria on the left more or less important then sub criteria on the right (same line) to ensure the main criteria is assumed by the plan?

2 Rate: Explicit how many times the sub-criteria on the left is more or less important then sub-criteria on the right (same line)?

TABLE 1 GENERAL CRITERIA pair wise comparison

		CRITERIA												
		rating score												
		Criteria on the left is more important than criteria on the right			equal	Criteria on the right is more important than criteria on the left								
		9	7	5	3	1	3	5	7	9				
Criteria 1	C1 Environmental Sustainability	9	7	5	3	1	3	5	7	9	C2 Socio-Cultural Sustainability	Criteria 2		
Criteria 1	C1 Environmental Sustainability	9	7	5	3	1	3	5	7	9	C3 Economic Sustainability	Criteria 3		
Criteria 1	C1 Environmental Sustainability	9	7	5	3	1	3	5	7	9	C4 Technical Sustainability	Criteria 4		
Criteria 2	C2 Socio-Cultural Sustainability	9	7	5	3	1	3	5	7	9	C3 Economic Sustainability	Criteria 3		
Criteria 2	C2 Socio-Cultural Sustainability	9	7	5	3	1	3	5	7	9	C4 Technical Sustainability	Criteria 4		
Criteria 3	C3 Economic Sustainability	9	7	5	3	1	3	5	7	9	C4 Technical Sustainability	Criteria 4		

The questionnaire continues for subcriteria



The complete questionnaire to compare criteria

filled in by	PP expert	DIS ID.	DIS NAME OF PP	DIS SECTOR	DIS NAME OF EXPERT	DIS MAIL
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Instruction:

purpose1 compare criteria to determine weights

1 Answer: Is the criteria on the left more or less important than criteria on the right (same line) to achieve the general scope of the PLAN?

2 Rate: Explicit how many times the criteria on the left is more or less important than criteria on the right (same line)?

NB use YELLOW color to mark the cell corresponding to YOUR judgement or if you are working on paper mark your choice

purpose2 compare sub- criteria to determine related weights

repeat the same operation to compare subcriteria among each other

1 Answer: Is the sub-criteria on the left more or less important than sub criteria on the right (same line) to ensure the main criteria is assumed by the plan?

2 Rate: Explicit how many times the sub-criteria on the left is more or less important than sub-criteria on the right (same line)?

TABLE 1 GENERAL CRITERIA pair wise comparison

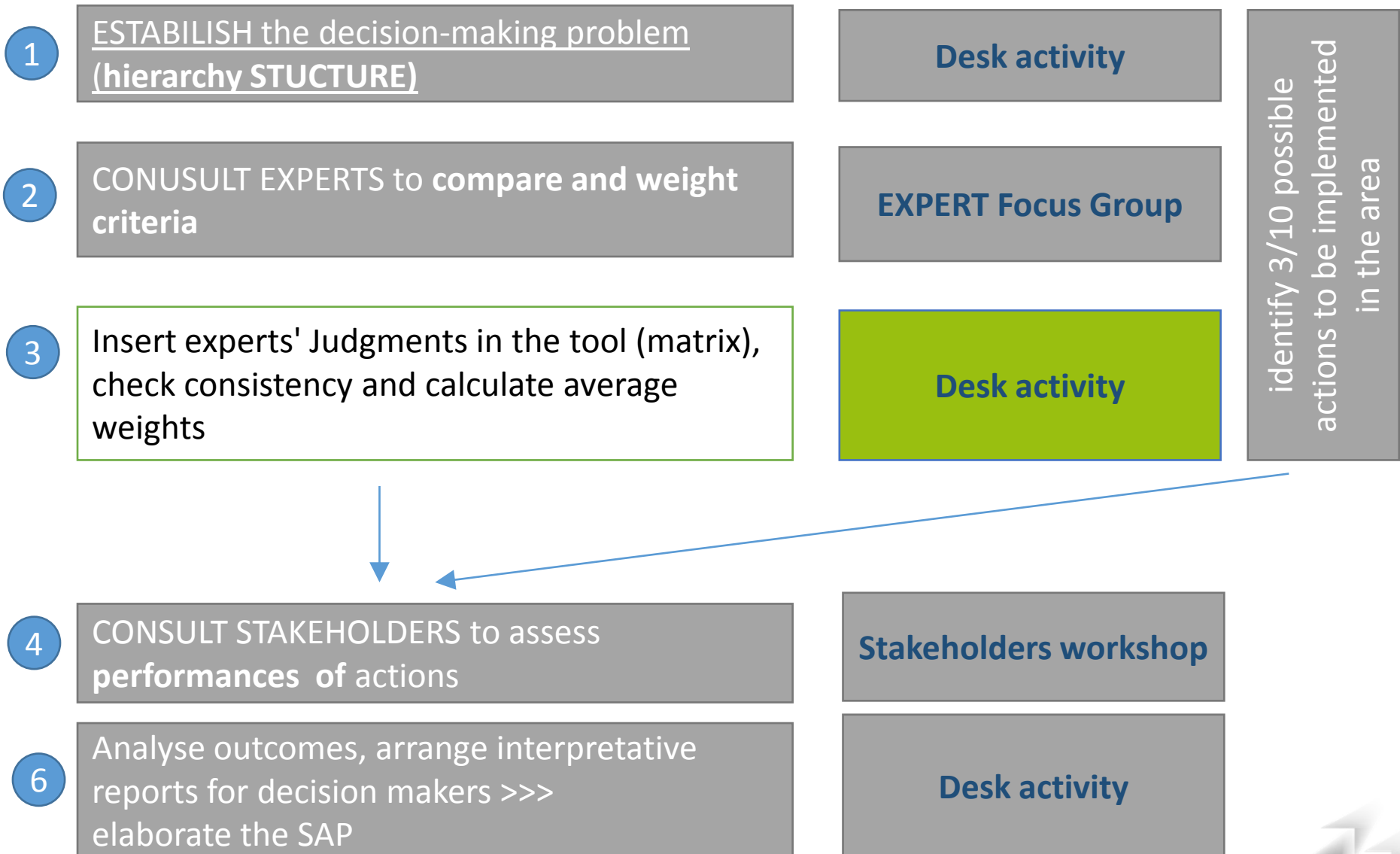
		CRITERIA												
		rating score												
		Criteria on the left is more important than criteria on the right					equal	Criteria on the right is more important than criteria on the left						
Criteria 1	C1 Environmental Sustainability	9	7	5	3	1	3	5	7	9	C2 Socio-Cultural Sustainability	Criteria 2		
Criteria 1	C1 Environmental Sustainability	9	7	5	3	1	3	5	7	9	C3 Economic Sustainability	Criteria 3		
Criteria 1	C1 Environmental Sustainability	9	7	5	3	1	3	5	7	9	C4 Technical Sustainability	Criteria 4		
Criteria 2	C2 Socio-Cultural Sustainability	9	7	5	3	1	3	5	7	9	C3 Economic Sustainability	Criteria 3		
Criteria 2	C2 Socio-Cultural Sustainability	9	7	5	3	1	3	5	7	9	C4 Technical Sustainability	Criteria 4		
Criteria 3	C3 Economic Sustainability	9	7	5	3	1	3	5	7	9	C4 Technical Sustainability	Criteria 4		

TABLE 1.1 COMPARISON of SUB CRITERIA connected to general criteria C1

		C1 Environmental Sustainability												
		rating score												
		Criteria on the left is more important than criteria on the right					equal	Criteria on the right is more important than criteria on the left						
subcriteria 1.1	1.1 Impacts on Air quality	9	7	5	3	1	3	5	7	9	1.2 Impacts on Soil and underground quality	subcriteria 1.2		
subcriteria 1.1	1.1 Impacts on Air quality	9	7	5	3	1	3	5	7	9	1.3 Impacts on Water quality	subcriteria 1.3		
subcriteria 1.1	1.1 Impacts on Air quality	9	7	5	3	1	3	5	7	9	1.4 Impacts on Ecosystems preservation	subcriteria 1.4		
subcriteria 1.2	1.2 Impacts on Soil and underground quality	9	7	5	3	1	3	5	7	9	1.3 Impacts on Water quality	subcriteria 1.3		
subcriteria 1.2	1.2 Impacts on Soil and underground quality	9	7	5	3	1	3	5	7	9	1.4 Impacts on Ecosystems preservation	subcriteria 1.4		
subcriteria 1.3	1.3 Impacts on Water quality	9	7	5	3	1	3	5	7	9	1.4 Impacts on Ecosystems preservation	subcriteria 1.4		



AHP as participated process



Matrix, normalization consistency .

2 MATRIX of PAIR WISE COMPARISON - MAIN CRITERIA LEVEL

compare criteria in respect to the established goal		Criteria 1	Criteria 2	Criteria 3	Criteria 4
		C1 Environmental Sustainability	C2 Socio-Cultural Sustainability	C3 Economic Sustainability	C4 Technical Sustainability
Criteria 1	C1 Environmental Sustainability	1,00	0,00	0,00	0,00
Criteria 2	C2 Socio-Cultural Sustainability	0,00	1,00	0,00	0,00
Criteria 3	C3 Economic Sustainability	0,00	0,00	1,00	0,00
Criteria 4	C4 Technical Sustainability	0,00	0,00	0,00	1,00
	total	0,00	0,00	0,00	1,00

Insert in this table the value marked in the table 1, following the color of the cell



NORMALIZATION and consistency

GOAL	Criteria 1	Criteria 2	Criteria 3	Criteria 4	TOTAL	AVERAGE weight	Consistency	
	C1 Environmental Sustainability	C2 Socio-Cultural Sustainability	C3 Economic Sustainability	C4 Technical Sustainability				
Criteria 1	C1 Environmental Sustainability	0,40	0,35	0,58	0,31	1,65	41,24%	4,35
Criteria 2	C2 Socio-Cultural Sustainability	0,06	0,05	0,03	0,06	0,20	4,95%	4,08
Criteria 3	C3 Economic Sustainability	0,13	0,35	0,19	0,31	0,99	24,79%	4,12
Criteria 4	C4 Technical Sustainability	0,40	0,25	0,19	0,31	1,16	29,02%	4,13
	total	1,00	1,00	1,00	1,00	4,00		

normalized sum must be 1

average weight can be VALIDATED only if consistency is ensured

internal consistency of the judgment is ensured when the value in this column has a range between 4 and 4,5



Average weight

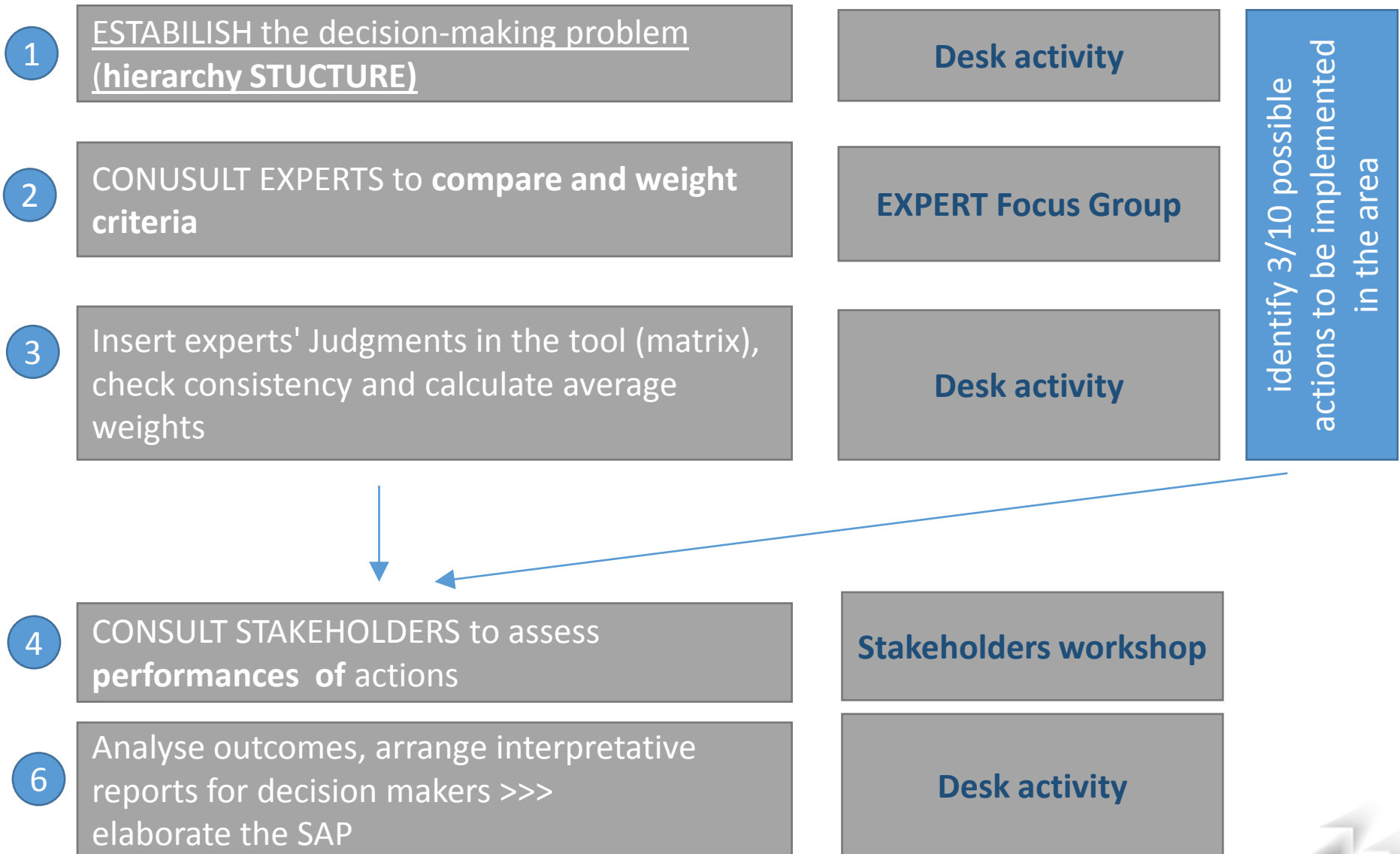
filled in by		PP	inv. n.	inv. name of pp												
average weight of main criteria																
		EXPERT 1	EXPERT 2	EXPERT 3	EXPERT 4	EXPERT 5	EXPERT 6	EXPERT 7	EXPERT 8	EXPERT 9	EXPERT 10	AVERAGE				
Criteria 1	C1 Environmental Sustainability												0			
Criteria 2	C2 Socio-Cultural Sustainability												0			
Criteria 3	C3 Economic Sustainability												0			
Criteria 4	C4 Technical Sustainability												0			
average weight of subcriteria C1																
		EXPERT 1	EXPERT 2	EXPERT 3	EXPERT 4	EXPERT 5	EXPERT 6	EXPERT 7	EXPERT 8	EXPERT 9	EXPERT 10	AVERAGE				
subcriteria 1.1	1.1 Impacts on Air quality												0			
subcriteria 1.2	1.2 Impacts on Soil and underground quality												0			
subcriteria 1.3	1.3 Impacts on Water quality												0			
subcriteria 1.4	1.4 Impacts on Ecosystems preservation												0			
average weight of subcriteria C2																
		EXPERT 1	EXPERT 2	EXPERT 3	EXPERT 4	EXPERT 5	EXPERT 6	EXPERT 7	EXPERT 8	EXPERT 9	EXPERT 10	AVERAGE				
subcriteria 2.1	2.1 Human health and safety												0			
subcriteria 2.2	2.2 Ethic and equity												0			
subcriteria 2.3	2.3 Community involvement												0			
subcriteria 2.4	2.4 Identity preservation												0			
average weight of subcriteria C3																
		EXPERT 1	EXPERT 2	EXPERT 3	EXPERT 4	EXPERT 5	EXPERT 6	EXPERT 7	EXPERT 8	EXPERT 9	EXPERT 10	AVERAGE				
subcriteria 3.1	3.1 Impacts on the attractiveness of the place												0			
subcriteria 3.2	3.2 Value for public organizations												0			
subcriteria 3.3	3.3 Economic externalities												0			
subcriteria 3.4	3.4 Employment												0			
average weight of subcriteria C4																
		EXPERT 1	EXPERT 2	EXPERT 3	EXPERT 4	EXPERT 5	EXPERT 6	EXPERT 7	EXPERT 8	EXPERT 9	EXPERT 10	AVERAGE				
subcriteria 4.1	4.1 Use of eco-compatible materials and technologies												0			
subcriteria 4.2	4.2 Flexibility of the project												0			
subcriteria 4.3	4.3 Minimisation of waste												0			
subcriteria 4.4	4.4 Life span												0			

In the case experts are less or more than 10, change the calculation and divide for the number of experts consulted

Copy and past the average weight coming out by the "matrix" filled in with judgements expressed by each experts
In last colour divide for the number of experts counsulted



AHP as participated process



Select and describe shortly the actions using the form delivered in T1 > provide actions description to staholders during the workhop



B. Detailed description of concrete actions

For each of the above actions, please indicate:

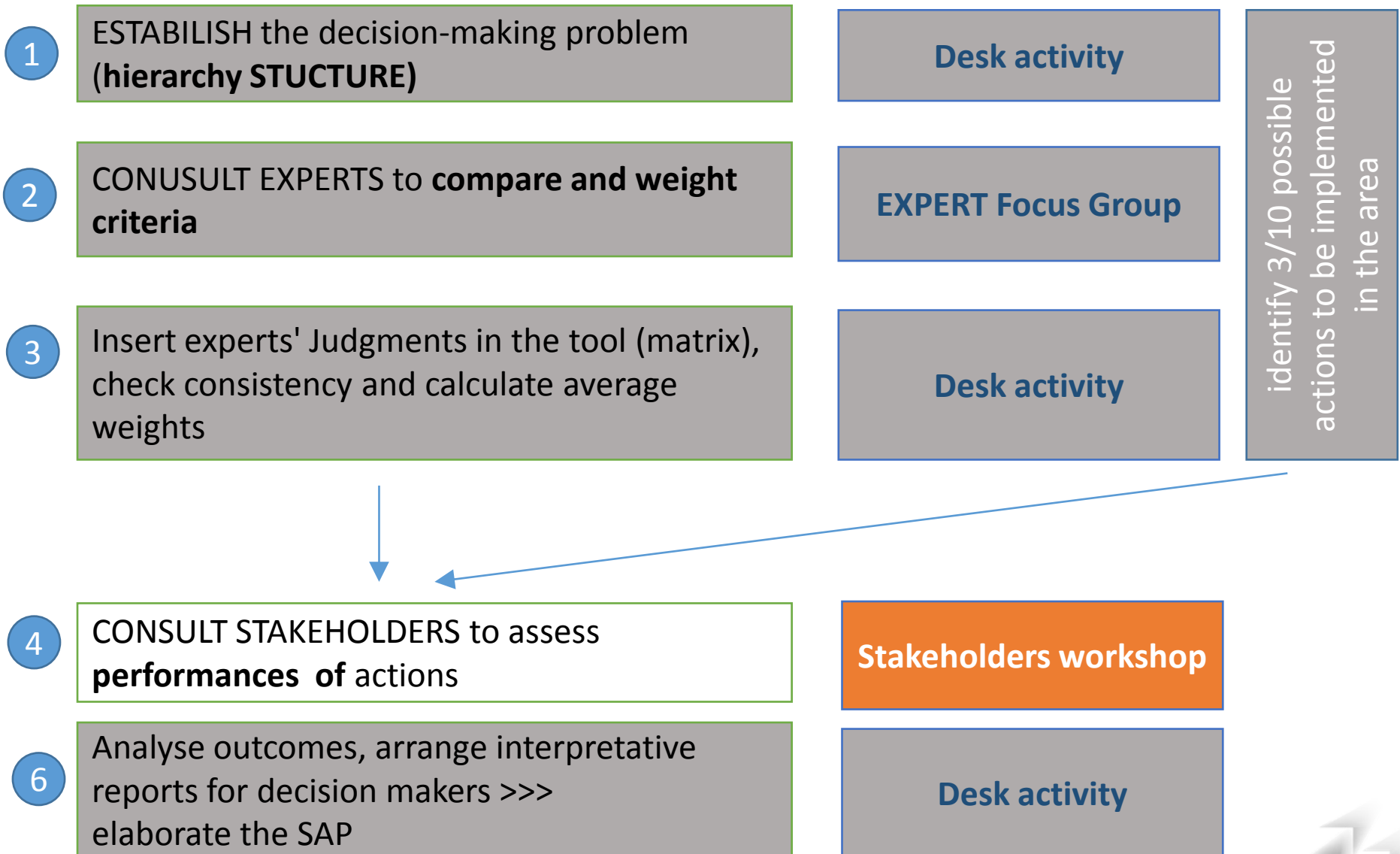
<p>Content of specific action</p> <p><i>Setting the scene. Please provide brief background information on the action. For infrastructure projects - please attach map of location.</i></p>
<p>Short problem description</p> <p><i>Please outline the specific problem to be solved. Please also indicate possible risks</i></p>
<p>Objective of specific action</p> <p><i>What should be the outcome of this action?</i></p>
<p>Partners involved and description of participation process</p> <p><i>Who does what? Please list partners involved and briefly explain their function in the process. You should also refer to your regional stakeholder tables and the associated partner network</i></p>



<p>Planning of activities (timeline)</p> <p><i>Please describe the stepwise process planning (short, mid and long-term perspective).</i></p>
<p>Financing</p> <p><i>Please describe amount and source of funding (public: municipal, regional, national, European / private).</i></p>
<p>Progress of implementation</p> <p><i>Please describe your concrete steps of implementation of the specific action. You should also refer to positive and inhibiting factors affecting the process (e.g. use of measures, instruments, and remediation techniques, development of recommendations for brownfield remediation, discussion with funding bodies, political support). This section should be regularly updated (every two months).</i></p>



AHP as participated process



Performance

Stakeholders are invited to rate the actions against diverse criteria and subcriteria

expert	ins sector	ins name of expert	e-mail
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4 performance assessment at criteria level

		ACTION 1			ACTION 2			ACTION 3			ACTION 4			ACTION n							
		p	w	PT	p	w	PT	p	w	PT	p	w	PT	p	w	PT					
Criteria 1	C1 Environmental Sustainability			0	0			0	0			0	0			0	0			0	0
Criteria 2	C2 Socio-Cultural Sustainability			0	0			0	0			0	0			0	0			0	0
Criteria 3	C3 Economic Sustainability			0	0			0	0			0	0			0	0			0	0
Criteria 4	C4 Technical Sustainability			0	0			0	0			0	0			0	0			0	0
total score		0			0			0			0			0							

4.1 performance assessment at Subcriteria level /c1

		ACTION 1			ACTION 2			ACTION 3			ACTION 4			ACTION n							
		p	w	PT	p	w	PT	p	w	PT	p	w	PT	p	w	PT					
subcriteria 1.1	1.1 Impacts on Air quality			0	0			0	0			0	0			0	0			0	0
subcriteria 1.2	1.2 Impacts on Soil and underground quality			0	0			0	0			0	0			0	0			0	0
subcriteria 1.3	1.3 Impacts on Water quality			0	0			0	0			0	0			0	0			0	0
subcriteria 1.4	1.4 Impacts on Ecosystems preservation			0	0			0	0			0	0			0	0			0	0
		0			0			0			0			0							



Performance

4.2 performance assessment at Subcriteria level /c2

		ACTION 1			ACTION 2			ACTION 3			ACTION 4			ACTION n			
		p	w	PT	p	w	PT	p	w	PT	p	w	PT	p	w	PT	
subcriteria 2.1	2.1 Human health and safety			0	0			0	0			0	0			0	0
subcriteria 2.2	2.2 Ethic and equity			0	0			0	0			0	0			0	0
subcriteria 2.3	2.3 Community involvement			0	0			0	0			0	0			0	0
subcriteria 2.4	2.4 Identity preservation			0	0			0	0			0	0			0	0
		0			0			0			0			0			

4.3 performance assessment at Subcriteria level /c3

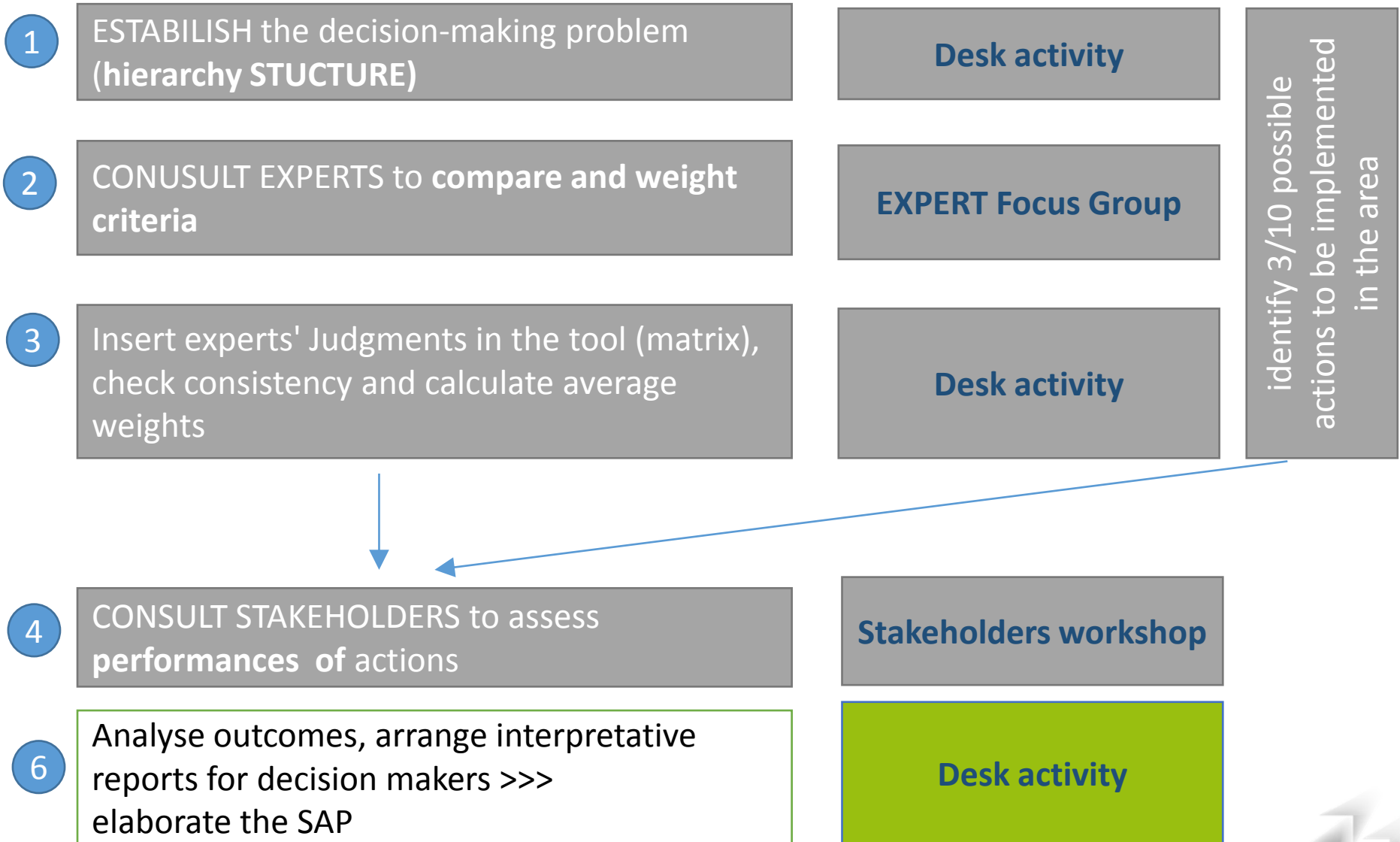
		ACTION 1			ACTION 2			ACTION 3			ACTION 4			ACTION n			
		p	w	PT	p	w	PT	p	w	PT	p	w	PT	p	w	PT	
subcriteria 3.1	3.1 Impacts on the attractiveness of the place			0	0			0	0			0	0			0	0
subcriteria 3.2	3.2 Value for public organizations			0	0			0	0			0	0			0	0
subcriteria 3.3	3.3 Economic externalities			0	0			0	0			0	0			0	0
subcriteria 3.4	3.4 Employment			0	0			0	0			0	0			0	0
		0			0			0			0			0			

4.3 performance assessment at Subcriteria level /c3

		ACTION 1			ACTION 2			ACTION 3			ACTION 4			ACTION n			
		p	w	PT	p	w	PT	p	w	PT	p	w	PT	p	w	PT	
subcriteria 4.1	4.1 Use of eco-compatible materials and technologies			0	0			0	0			0	0			0	0
subcriteria 4.2	4.2 Flexibility of the project			0	0			0	0			0	0			0	0
subcriteria 4.3	4.3 Minimisation of waste			0	0			0	0			0	0			0	0
subcriteria 4.4	4.4 Life span			0	0			0	0			0	0			0	0
		0			0			0			0			0			



AHP as participated process



Last step - desk

- Raking actions against all criteria and subcriteria
- Or Raking actions against part of the criteria and subcriteria
- **Interpret the outcomes and provide decision makers with a knowledge framework**
- Let them decide which action should be implemented first



Summarizing



Two different .xls will be provided to partners:

1. Tool1: to be used with experts
2. Tool 2: to be used with stakeholders



Part/TOOL1

1. Partners **DEFINE CRITERIA AND SUBCRITERIA SPECIFIC** for the FUA/site addressed with the help of WP4 experts (Francesca+Raffaella)
2. Establish the **focus group of local thematic experts**
 - they know the sites, but not necessary they need to know the actions
3. Explain the scope of the project and of the participated evaluation process (if possible tell we use AHP method)
4. Invite **thematic experts** to answer the questionnaire (pair wise comparison)
5. Ask the support to the WP4 experts to Input data in the MATRIX of PAIR WISE COMPARISON (there will be 1 file for each expert: save with name AHP_tool1_exp1, AHP_tool1_exp2, AHP_tool1_exp n, ...)
6. In case of inconsistency, the concerned expert will be asked to answer one more time to the questionnaire



PART/TOOL2

1. Based on results of Tool 1, WP4 experts (Francesca+Raffaella, calculate the average weights for each criteria and subcriteria (desk activity) and provide the partner the table to assess performances
2. The Partner prepares a synthetic description of each possible Actions to be implemented in the considered area
3. The Partner identifies the stakeholders and invite them at the performance assessment workshop:
 - *if the case, we suggest to explain it's a pilot activity in the EU project, it can be considered as a sort of capacity building experience... This approach could help to reduce stress in critical groups.*
4. Invite stakeholders to fill in the performance table evaluating the performance level of each action against each criteria.
5. WP4 experts will support the partner in elaborating data collected through these performance tables.
6. Based on these results **plus additional consideration**, partner selects the priority Actions for its area, to be described more in detail in the SAP



We are here to help!

Thanks for the attention

Francesca Borga, Raffaella Lioce

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