

INTELLECTUAL OUTPUT: O2

PRACTICE KIT FOR SUSTAINABLE TRANSNATIONAL VET MOBILITY

This document includes the following two sub-outputs, the second composed by two parts:

O2-A1: Developing a conceptual methodology for framing O2 work

O2-A2: Practice Kit Development

A2.1 Concept and Design Establishment

A2.2 Content Elaboration

O2-A1

The development of the Practice Kit will be based on a Conceptual Methodology. The Practice Kit comprises a Guidance Manual on how to go through the self-assessment process using a web-based Self Audit Tool, the Self-Audit Tool itself, and a Progress Portfolio to allow users to track their improvements. The Practice Kit development corresponds to O2 activity of the StayMobil project; therefore it will be referred to as Activity from now on.

The Conceptual Methodology should frame the work for developing the Practice Kit. Considering the need for a fast, reliable and flexible work methodology, the task leader established to rely on the Deming cycle, otherwise called PDCA cycle.

As a short recap of what a PDCA cycle implies, let us summarize in few words its functioning.

The cycle is so called since its Phases can be arranged in an uninterrupted sequence iterating until completion of the activity.

PDCA is a handy acronym for Plan – Do – Check – Act. These catchwords are only proxy for the description of the full Phases of the cycle.

Plan: Planning Phase involves assessing a current process, or a new process, and figuring out how it can be improved upon;

Do: Do Phase allows the plan from the previous step to be enacted;

Check: during the Check Phase, the data and results gathered from the Do Phase are evaluated;

Act: during the Act Phase, either implementing is performed according to the results of the Check Phase or a new Plan Phase is started in order to improve on the next Do Phase.

The following picture can illustrate the process.



During O2.A2.1 (Concept and Design Establishment, see below pp.7-8) partners discussed the potential arrangement of the Steps and came to the conclusion that the Guidance Manual should be postponed to the Self-Audit Tool since the team could not properly write a step-by-step guide on how to use the Tool without the Tool itself being already coded. Thus Step 1 became the Self-Audit Tool and Step 2 the Guidance Manual.

The work to be done for each Step can be summarized in the following short descriptions.

Guidance Manual

The Guidance Manual should deliver a detailed description of the required process to carry out organization assessment on the Tool. The Manual will display a number of chronologically sequenced passages. Each passage should be portrayed with:

- One screenshot of the initial situation;
- One written description of the action to take in order to move to the following condition;
- One screenshot detailing the point b also through the use of images such as arrows, lines, buttons, etc., or two (or more) different screenshots showing the change of the screen from point b to point d;
- One screenshot of the mutated situation which is also the point a of the following passage.

In sum, the final version should probably contain much pictures and not so much text as reading is longer and more complicated than a simple look when it comes to describe the functioning of software.

Web-based Self-Audit Tool

The Self-Audit Tool should display a simple web page with an online questionnaire where members of organisations can insert their answers. This can take the form of a blank space or a multiple answer diagram with buttons. The questions are directly drawn from the Reference Framework matrix (O1) already prepared by partners, with potential changes to be implemented for any reason.

Progress Portfolio

The Portfolio will be an Action Plan downloadable from the same website where the self-audit took place. The Action Plan will be based on the results of the assessment and in an automated way will be filled in with weaknesses of the organisations and suggestion to take countermeasure. The staff of the organizations will be able to implement such measures following and filling in the Action Plan used as a guide towards improvement.

The following matrix show how Steps and Phases relates:



	Plan	Do	Check	Act
Self-Audit Tool	1. Elaborate correspondence between matrix questionnaires and Tool's questions	2. Coding	3. Control on results of organisations' assessment	4. Go back to Plan phase or go ahead to implementation of Guidance Manual
Guidance Manual	5. Elaborate an editorial plan on how to arrange the section and appearance of the manual	6. Writing	7. Control on the easiness of use of the manual with reference to the Tool	8. Go back on Do phase or go ahead to Progress Portfolio
Progress Portfolio	9. Elaborate the relationship between results of the online assessment and the improvement to implement	10. Writing + coding	11. Control on compliance between results and suggested improvement action	12. Go back to Plan phase or go ahead to make the Practice Kit available for test and use



Activity Tasks

The above matrix refers to 12 sub-steps generated by the going of each Step through all Phases. The sub-steps are the actual deeds to carry out in order to reach the realisation of the Practice Kit; from now on, in order to address them unequivocally in the document the sub-steps will be called Tasks.

The following is a short description of each Task, in chronological order according to the above matrix. The numbers of the Tasks are identical to the ones indicated in each box of the matrix.

Task 1: during Task One, the partners will prepare a method to make the questions of the matrix produce a value-oriented result which can be set on a scale in order to give a verbal assessment on the strength of the organisation against the indicators related to the questions. This operation is important as it leads the technical staff during the coding of the Tool; in other words, the turning of the Reference Framework in an online instrument has to be theoretically planned since this very first sub-step.

Task 2: during Task Two, the technical staff will follow the procedure established in Task One and write the code of the Tool accordingly. At the end of this sub-step, a functioning prototype of the Tool should be ready to be launched for trials and testing; the following Tasks will allow for control and revision during multiple or single Check and Act Phases.

Task 3: during Task Three, tests will be performed inside the consortium in order to evaluate the results of the Tool in terms of technical working and capacity of correctly represent the situation inside assessed organisations.

Task 4: during Task Four, based on results of Task Three a decision will be taken if going on with preparation of Guidance Manual or return to Task One in order to further improve the correspondence between questions and result measurement in order to fine tune the Tool.

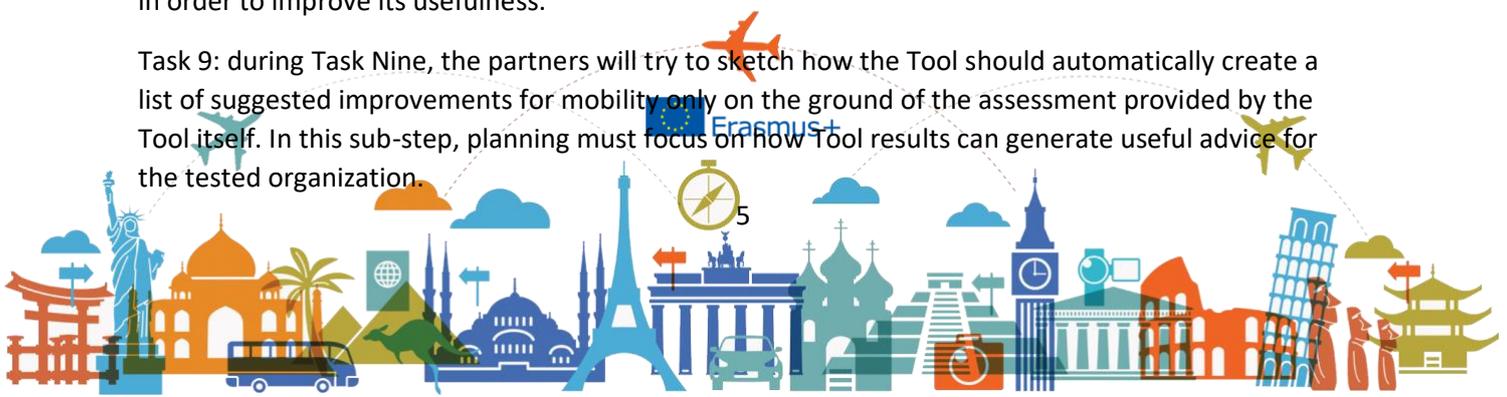
Task 5: during Task Five, a draft plan of the Guidance Manual editorial arrangement and general appearance should be prepared before starting to actually write it. Any editing choice should be taken under this Task. At the end of Task Five, the consortium should have a thorough idea on how the Manual would look and work.

Task 6: during Task Six, the Manual is actually written down and edited. At the end of this Sub-step, a Word/PDF draft of the Manual should be fully available to all partner in order to be read and assessed.

Task 7: during Task Seven, all partners will evaluate the Guidance Manual with respect to how a casual user would be able to follow the instructions for navigating the Tool without issues, doubts or obstacles. Some test could be performed with staff of the partners not involved in the project.

Task 8: during Task Eight, based on results of Task Seven, a decision will be taken if going on with preparation of Progress Portfolio or return to Task Five in order to re-plan the outlook of the Manual in order to improve its usefulness.

Task 9: during Task Nine, the partners will try to sketch how the Tool should automatically create a list of suggested improvements for mobility only on the ground of the assessment provided by the Tool itself. In this sub-step, planning must focus on how Tool results can generate useful advice for the tested organization.



Task 10: during Task Ten, the technical staff along with research staff will encode algorithms for translating the evaluations produced by Tool into viable suggestions for mobility organisations.

Task 11: during Task Eleven, all partners will check on whether the Tool outputs are actually in line with suggestions coming from the same source and there is a sensible connection between the results of the assessment and the advices contained in the action plan.

Task 12: during Task Twelve, based on results of Task Eleven a decision will be taken if going on with the project activities (O2-A4 and O2-A5) in order to complete the Practice Kit and make it fully operative, after the final test performed by partner organisations and external stakeholders. Otherwise, the activities will be back to Task Nine in order to improve the coding and/or the suggestions.

Proposed schedule

According to the project description, activities for Practice Kit development should range from M8 to M14, with M15 to M18 dedicated to testing and completion. Since these last steps are somehow separated from the proper development of the Tool, they have not been addressed in this Methodology. Therefore, the following proposed schedule runs from April 2018 to November 2018 included.

T	M8				M9				M10				M11				M12				M13				M14			
	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9	W 10	W 11	W 12	W 13	W 14	W 15	W 16	W 17	W 18	W 19	W 20	W 21	W 22	W 23	W 24	W 25	W 26	W 27	W 28
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0																												
1																												
2																												

T = Tasks; M = months; W = weeks

Grey

Light: A2.1 Concept and Design Establishment

Dark: A2.2 Content Elaboration



Color

Blue: Plan

Yellow: Do

Green: Check

Red: Act

Multiple cycles of Phases have been introduced in the schedule in order to let Do Phases have a good number of associated Checks. However, it is not strictly necessary to go through all the proposed cycles: it obviously depends on the results of the Check Phases.

O2-A2.1

Output A2.1 is the outcome of the brainstorming which took place among partners in order to come up with a proper methodology and a shared working plan for all activities including task distribution for partners.

First results of A2.1 brainstorming was to switch the preparation of Self-Audit Tool and Guidance Manual in order to develop them better (see above). During this part of the project, the following conclusions have been reached:

- The coding of the software could start a little bit later in case there is need for further elaboration on the methodology and the organisation of work; the functioning of the Tool is not commonplace and an appropriate design is required not to make the software bugged beyond capacity to work
- Sharing of tasks could be arranged according to the following table:

	Task	Description
AIAM	<i>Progress portfolio</i>	The partner will work on the Action Plan, preparing a list of potential remedy measures and short instructions on how to implement them; those measures will be compliant with the outcome of the Tool self-audit
ECQ	<i>Progress portfolio</i>	The partner will assist AIAM in revising all the materials produced by AIAM in order to assure that implementation of the measures follows a viable quality path
ESSENIA	<i>Tool coding</i>	The partner will help ET UK in testing the Tool, trying to simulate actual use of the Tool itself in order to see what outcomes the coded lines could actually produce
ET UK	<i>Tool Coding</i>	The partner will take care of all the technical part, writing all the code on the ground of input received by other partners and methodology; along with EVBB, the partner will also supervise the general coordination of the entire Output



EVBB	<i>Guidance Manual</i>	The partner will supervise all the Output production along with ET UK; also, it will support VK in the preparation of the Guidance Manual editorial supervision and writing procedure
VK	<i>Guidance Manual</i>	The partner will supervise all the editorial process of the Manual, receiving screenshots from the partners in charge of coding and preparing the related descriptions and the attached text explanation

Deviation from the above table will also be possible in case of specific requests by partners, for instance in case of a better assessment of internal competences; modifications should timely communicated to all the consortium in order to be agreed and arrange a new sharing of tasks.

O2.A2-2

The following part of this document covers the elaboration of content for the Practice Kit, especially detailing the actual working of the algorithm behind the Tool and the hypothesized link between the Tool and the Action Plan.

Now, conceptual methodology purpose was to help in turning the Reference Framework into the Practice Kit.

This means that now we have a series of indicators which we should implement as measurement of self evaluation and progress. Therefore, what we need here is a method to link the results of indicators to an overall assessment which immediately can show strengths and weaknesses in mobility quality, leading to remedy measures. This has to be done as a standardised, programmed procedure so to translate it into interpreted code for a machine.

There are basically three kind of answers to the questions of the matrix: open answers, yes/no answers, and numbers. This means that at the end of each self-assessment we will have a non-homogeneous set of scattered data, partly verbal and partly numerical. However, since the assessment procedure must be standardised, this set has to be reduced to pre-determined values which are one and the same for each evaluation.

We also need a weighting system to make most relevant questions count more than less relevant ones.

As you can understand, the task is hard. EVBB has tried to sketch a simple method which surely leave much room for improvement but we think it is a good starting point.

We propose to weight each question with a relevance mark or **relevance factor** comprised between 1 and 3 displaying the relevance/importance for the general assessment of the organisation:

1. useful
2. important
3. fundamental



Then different answers should be treated in different ways, bearing in mind a final purpose of setting up a fivefold scale with layers arranged from the worst to the best when it comes to the description of organisations' condition. This means that at the end of each question assessment, whatever the answer, the result will be a score ranging from 1 to 5, with the chance of 0 or 6 in very particular conditions, in order to account for out-of-scale exceptional situations.

Y/N answers can be simply assigned a numerical value depending on the relevance of the question. Considering the hypothetical need for a five-layers scale, we can just agree on yes being the "right" answer and the stick to the following adjustment table - or just reverse it when the "right" answer is no.

Relevance	Yes	No
Useful	3	2
Important	4	1
Fundamental	5	0

Open questions are more complex to treat. Our proposal is, we introduce into the programme two-three ideal answers, then we set a simple algorithm calculating semantic deviation of the actual answers from the standards.

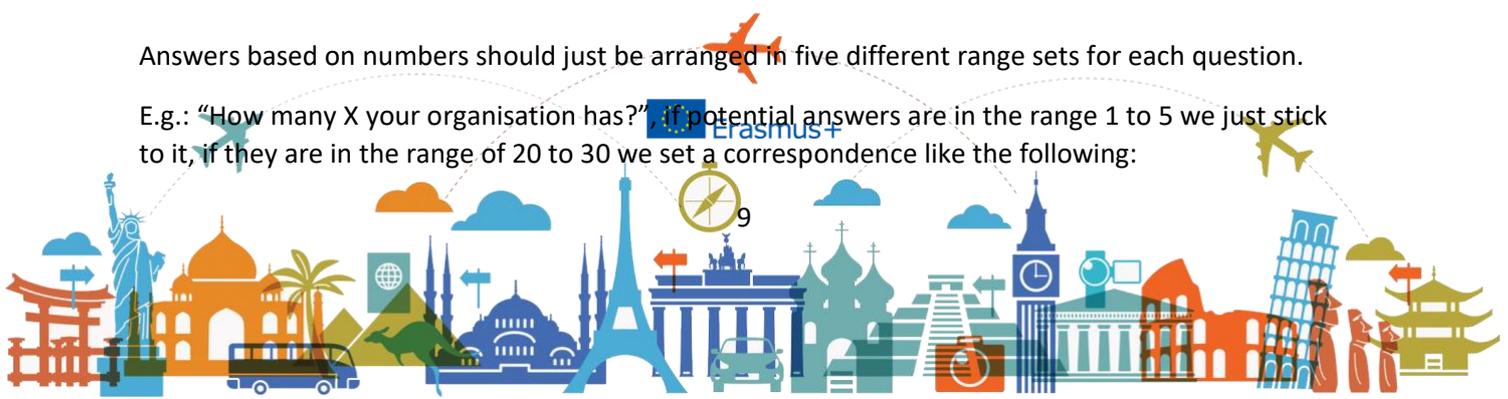
No idea on how this can be technically achieved, but we think that a method based on a tag cloud could work; anyway we have to discuss the matter with the technical staff as well.

We think that a deviation index comprised between 1 (minimum compliance) and 5 (maximum compliance) could be implemented in the web tool without undermining the essential work of the tool itself. Correction by relevance factor can take the form of an adjustment table like in the following example:

Relevance	1	2	3	4	5
Useful	0	1	2	3	4
Important	1	2	3	4	5
Fundamental	2	3	4	5	6

Answers based on numbers should just be arranged in five different range sets for each question.

E.g.: "How many X your organisation has?", if potential answers are in the range 1 to 5 we just stick to it, if they are in the range of 20 to 30 we set a correspondence like the following:



20-21 = 1

22-23 = 2

24-25 = 3

26-27 = 4

28-29 = 5

and so on. We might discuss the opportunity for the introduction of 0 and 6 values in this case.

Then we can rely on the same adjustment factor table previously seen for the open questions.

After that, the programme embedded in the website will calculate the average among the values scored by any single question. This way, the number of questions for each indicator will be made not relevant.

E.g.: 3, 2, 6; average $(3+2+6)/3 = 11/3 = 3,6$ periodic.

Taking in consideration either upper or lower first decimals, we can split each score in half, so to obtain the following scheme:

Final score	Summary evaluation
0 - 0,5	Awful
0,5 - 1	Very bad
1 - 1,5	Bad
1,5 - 2	Improvable
2 - 2,5	Acceptable
2,5 - 3	Interesting
3 - 3,5	Distinguished
3,5 - 4	Good
4 - 4,5	Actually very good
4,5 - 5	Excellent

Furthermore, we need now to highlight what weaknesses mostly are so to suggest potential actions to undertake in order to progress towards a steady improvement. For this specific task, the web tool should take in consideration the score (corrected by the relevance factor) of each single question.



We can conceive a scale detailing how serious is the need for intervention, in order to have guidelines to set up automatic, pre-programmed improvement steps based on each indicator. The scale could be as such:

	0	1	2	3	4	5	5+
Useful	Quality is deeply flawed. Countermeasures should be taken as soon as possible, possibly stopping mobility until remedy has been implemented.	Quality is scarce. Measures should be thought of in order to face issues.	Quality is dubious. There is wide room to improve and do better.	Quality is average. The organisations could arrange some intervention in time.	Quality is good. There is no need for immediate intervention.	Quality is excellent. The organisations can spread her standard as best practice.	Quality is excellent. The organisations can spread her standard as best practice.
Important	Quality is deeply flawed. Countermeasures should be taken as soon as possible, possibly stopping mobility until remedy has been implemented.	Quality is worryingly flawed. Countermeasures should be seen as priority inside the organisation.	Quality is scarce. Measures should be thought of in order to face issues.	Quality is dubious. There is wide room to improve and do better.	Quality is average. The organisations could arrange some intervention in time.	Quality is good. There is no need for immediate intervention.	
Fundamental	Quality is deeply flawed. Countermeasures should be taken as soon as possible, possibly stopping mobility until remedy has been implemented.	Quality is worryingly flawed. Countermeasures should be seen as priority inside the organisation.	Quality is scarce. Measures should be thought of in order to face issues.	Quality is dubious. There is wide room to improve and do better.	Quality is average. The organisations could arrange some intervention in time.		

