

Milestone 4.1: Tool for estimating the necessary capacity at the Central Facilities

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1. Purpose of the tool

This tool is designed to collect as accurate as possible quantitative information regarding the Central Facility (CF) plan for the years 2020-2025. Both implementation and pre-operation tasks are considered. The tool also calculates the costs associated to the plan, based on the actual use of resources at each participating institution.

The tool is developed in Excel with the purpose of being later integrated as a database into the IT Management tool. A first version was developed during ACTRIS-PPP and used by the CFs for preparing their first draft implementation plans and to calculate the costs for the Cost Book no.4. However, that version had a number of drawbacks, e.g. a) a too complicated design, raising difficulties for some of the CFs; b) impossibility to allocate resources separately for each institution, and at the time of their availability.; c) incomplete harmonization with the structure of the Cost Book; d) unprotected tabs leading to many errors and difficulties.

This new version keeps only the crucial information, by this simplifying significantly the process. In addition, it has a structure that can be easily exported to be integrated into a database and allows an increased flexibility for the institutions to describe their resources and costs. The increase of the number of National Facilities during the 2020-2025 timeframe is also considered for a more realistic planning of the activities and of the capacity.

2. Structure of the tool

The tool contains 1 Readme tab, 4 input tabs for describing the activities and the responsibilities of the CF, 15 tabs for describing the specifics of each participating institution, and 1 tab for extracting the reports. Automatic formulas, lists and conditional formatting guides the user of the tool. Tabs are protected to avoid human errors.

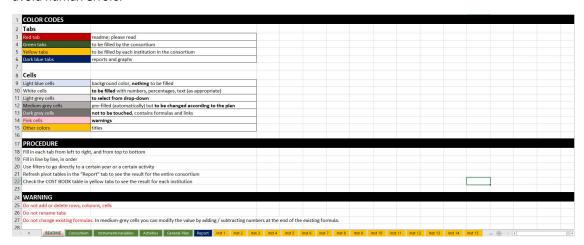


Figure 1 Readme tab: colour codes guiding the user of the tool

2.1 Consortium tab

In this tab the CF should list the institutions contributing to the activities (including the contact of the Unit Head), along with the main features of their accounting system: number of payed months per year, average number of working days per month, and rule for the calculation of indirect costs. This data is used:

a) in the tab "Instruments/variables" to create the drop-down list of institutions; b) for automatic renaming of the *Institution* tabs; c) in the *Institution* tabs for calculation of the costs.

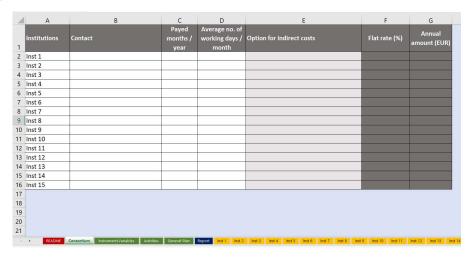


Figure 2 Consortium tab

2.2 Instruments/Variables tab

In this tab the CF should list the instruments / variables covered (maximum 25), and the expected number per year. A certain number of instruments/variables covered for the international networks is also considered, however as a constant over the years. In case the maximum capacity of the CF is exceeded, a warning is displayed in pink color, both on the "Maximum capacity" field, and in the corresponding year.

For each instrument/variable, the CF has to select the contributing institutions from the drop-down list (previously defined in the tab "Consortium").

The list of instruments/variables, participating institutions, and the numbers introduced here are used to:
a) create a pre-defined list as a drop-down in tab "General plan"; b) notify on the need for support, specific to each instrument/variable, in tab "General plan"; c) notify by colored cells (white cells) which institution should be involved in a task related to the corresponding instrument/variable, in tab "General plan".

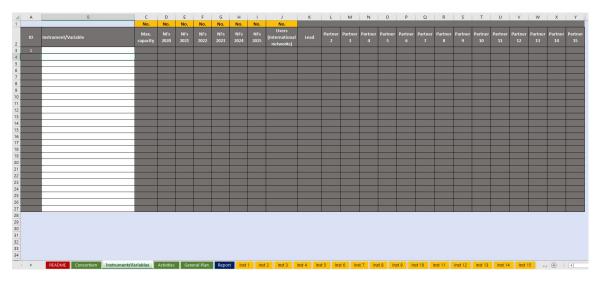


Figure 3 Instruments/Variables tab

2.3 Activities tab

In this tab the CF should list the activities envisaged (max. 25). It will create a pre-defined list for further use in the tab "General plan".



Figure 4 Activities tab

2.3 General plan tab

In this tab the CF should describe, in an organized manner, each task of each planned activity, for each year (2020 up to 2025). There are 199 possible tasks for each year. Tasks should be introduced for 2020, for the other years the information is automatically filled.

Lists defined in tabs "Consortium", "Instruments/variables" and "Activities" are displayed here as drop-downs. The quantity of support needed for each task and each year is automatically displayed (from the tab "Instruments/variables") but the CF can adjust it by typing directly in the cell. Out of the total quantity envisaged by the CF, parts should be allocated to the institutions participating to that particular task. These partial quantities will be transferred to the *Institution* tabs for further calculations.

In addition to the tasks associated to a certain instrument/variable, the tool allows to input tasks for general support, e.g. management or developments that have to be done regardless of the number of NFs and users. In this case, the tool automatically allocates the quantity "1". This pre-defined value can be changed by typing directly into the cell.

Tasks are described by: a) their association to a certain activity; b) their characteristics (Implementation or Pre-operation); c) their association to a certain instrument/variable (Focus of the task); d) how their results are measured (Measure of quantity); e) how many results they produce in a certain year (Quantity). The CF should distribute this quantity to the institutions participating in the task, according to the capacity and involvement of each.

Sum of costs per each participating institution for each task is at the end displayed in this tab (Cost). The cost of one result is calculated by dividing the total cost to the quantity (Cost/quantity).

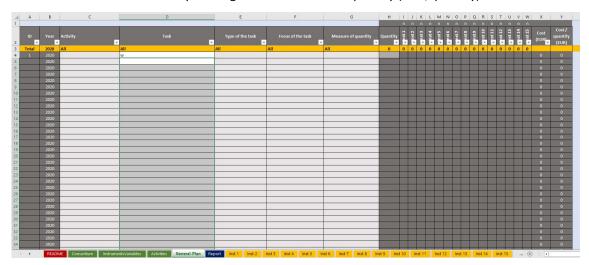


Figure 5 General Plan tab

2.3 Institution plan tab

The tool accommodates 15 identical tabs for max. 15 institutions contributing to a CF. Each tab is automatically renamed with the name of the institution, as listed in the tab "Consortium". Each Institution tab contains 3 tables:

Available resources

In this table the institution should list the personnel, equipment and spaces used for the CF work. These resources should be described in terms of: a) type of resource (Cost category); b) when it comes into place (Date of availability); c) cost for operating in a month (Monthly usage cost); d) part of the usage for the CF (% for ACTRIS).

Activity plan

In this table the institution should allocate resources to each task and each year, as working days (WD) necessary to cover the quantity of results allocate to the institution. Based on the information in tab "Consortium" and the allocated resources, the costs are calculated for each task and each year.

Cost Book

In this table the costs for each year and each cost category are displayed, except the investment costs. Costs are separated for implementation tasks and for pre-operation tasks. Costs for 2019 should be input manually.

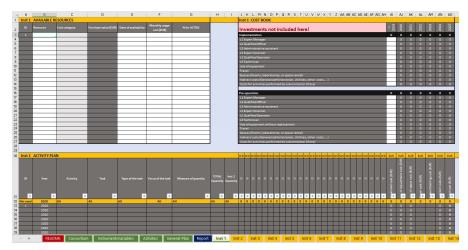


Figure 6 Example of an Institution tab

2.3 Reports tab

This tab displays Pivot tables and charts summarizing: a) quantities of results planned for each year, for all activities or separately; b) total costs incurred each year, for each activity or separately. Implementation and pre-operation activities are calculated and displayed separately.

3. Status of the tool

The tool is finalized and available for use on the ACTRIS internal website.