

# Project Implementation Plan (PIP) User Guide

FM0027-GDL-00034-E-V12

28 September 2006

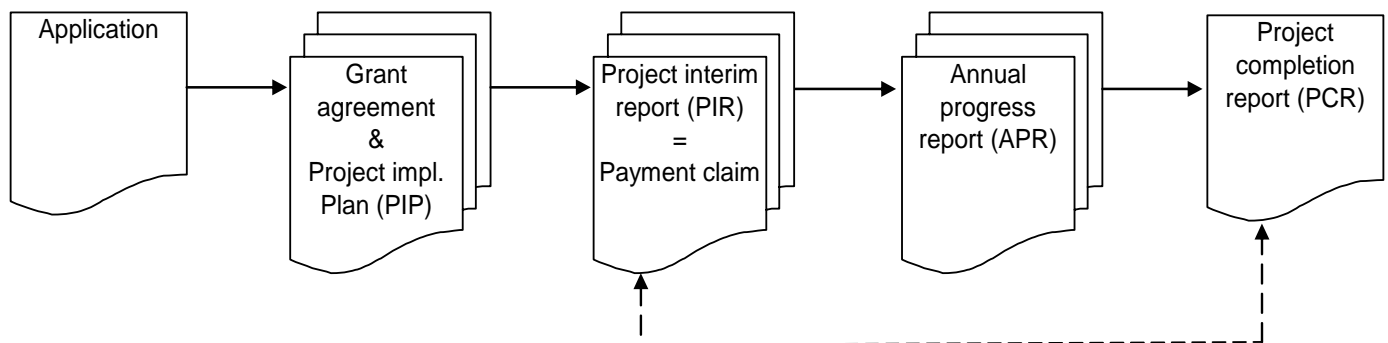
# 1 Introduction

The Project Implementation Plan (PIP) is a representation of the project in a structured format provided by the Financial Mechanism Office (FMO) and completed by the project promoter. The PIP is an annex to the Grant Agreement signed between the donors and the beneficiary state, therefore it constitutes a legally binding document.

Regardless the type of project assistance (i.e. individual project, programme or block grant), the same PIP format is to be used. In addition, there will always be one valid PIP per project even if the project is financed by both the EEA and Norwegian Financial Mechanism.

If there are modifications in the project during the implementation phase, and changes are above certain limits defined in the Terms and Conditions of the Grant Agreement, it triggers the submission of an updated PIP by the project promoter.

According to the Financial Mechanisms' legal framework, the Project Implementation Plan (PIP) forms an integral part of the project planning and reporting structure, as the following diagram shows.



**Figure 1: project planning and reporting structure**

The completed PIP will serve as a baseline for monitoring the performance of a project in terms of its scope, schedule and budget. It means that project interim reports (including individual payment claims) as well as annual progress reports and the project completion report will be reported against the PIP.

Regarding the PIP completion procedure, the FMO will generate a tailor-made PIP template to each project and send it to the project promoter through the Focal Point. Certain key project parameters are necessary to the FMO in order to generate a tailor-made PIP. These parameters will be captured from the application form and during the project appraisal process, or if needed, will be requested from the project promoter in the same time when a grant is offered. The project promoter shall fill in the PIP and return it electronically to the Focal Point, who will forward it to the FMO. A printed hard copy does not need to follow the electronic version since the FMO will print a hard copy and attach it to the Grant Agreement which should be signed.

In case of modifications of the project during the implementation, the project promoter is responsible to notify the FMO through the Focal Point about changes, and especially indicating modified project parameters. In such cases the FMO will generate a new PIP template containing actual figures to date, and for future periods the PIP is to be filled in by the promoter and returned to the FMO in the same way as the original PIP.

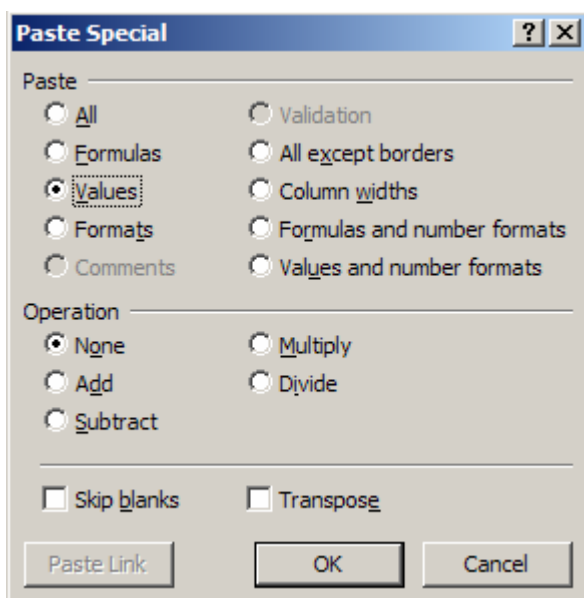
This user guide describes in details how to complete the PIP and specifies the information required in particular fields. Filling in correctly the PIP requires thorough project planning. Appendix 1 of the user guide describes an underlying project planning technique recommended by the FMO.

## 2 How to complete the PIP

The PIP is a representation of a project plan in a format that is standard across all projects funded by the Financial Mechanisms. *It is not a substitute for a detailed project plan prepared in accordance with relevant project stakeholders* – such a plan is a prerequisite for completion of the PIP

### General form usage points:

- The PIP is a Microsoft Excel workbook. It is compatible with versions of this software from Excel 97 onwards, although the use of versions more recent than Excel 2000 is strongly recommended;
- The PIP contains no Excel macros;
- Editable cells are light blue in colour, all other cells are locked and not editable by the user.
- Do NOT use cut/paste to move data from one part of the form, as this disrupts the form's structure;
- Do NOT drag entire cells by selecting the periphery for the same reason;
- To copy data from another sheet / another place in the same sheet:
  - o copy the data from the source sheet (ctrl-C)
  - o select the destination cells, and use 'Paste Special' with the 'Values' checkbox selected. to paste the data:



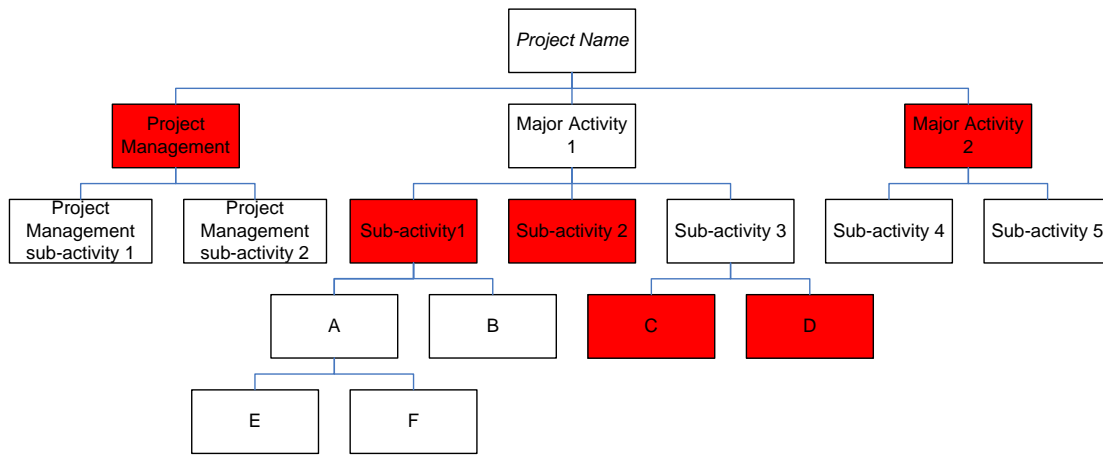
Extending data from one cell to another by dragging the bottom right hand corner of the border is acceptable.

### Selection of Activities for reporting

**The first thing to decide** when filling in the PIP is which activities will be used as a baseline. In every case the FMO insists that Project Management is treated as a separate activity.

The FMO does not require the lowest level to be used for reporting – the applicant can select about 10 activities across the project on which to report, as long as the sum of these activities results in the whole project. Small projects may not need as many as 10 activities, larger projects may need more. No project should have more than 20 activities.

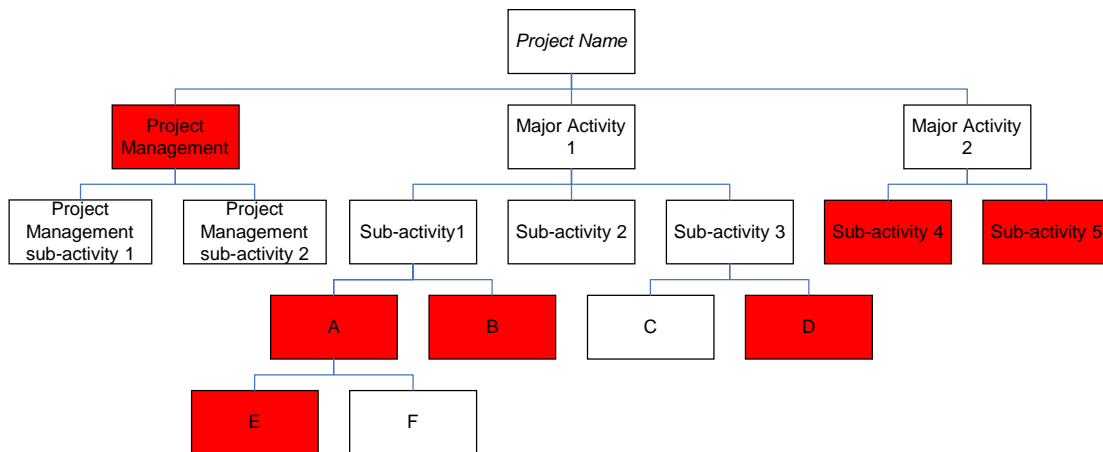
In Figure 2, the highlighted activities show a correct selection of activities for reporting:



**Figure 2: good selection of activities for reporting**

The highlighted activities add up to the entire project.

Figure 3 shows an incorrect selection of activities for reporting:



**Figure 3: bad selection of activities for reporting**

The contribution of activities 'sub-activity 2' and 'C' is not reported on, whilst the contribution of activity 'E' is counted twice: in its own right and as part of activity 'A'

### ***Complete details of activities***

For each activity, the following details need to be completed in part IV on worksheet 'Breakdown':

- Activity Name;
- Activity Scope Summary – a brief description of the objectives and outcomes of the activity;
- Planned Start Date – from the project schedule;
- Planned Completion Date – from the project schedule;
- Activity-specific expenses, for three month periods, falling into the types of expense listed in the project budget in part II on worksheet 'Summary'.

### ***Plan a disbursement schedule***

In part V on worksheet 'Breakdown':

- Select the reporting periods;

- Verify that the amount to be disbursed is equal to the grant awarded by the Financial Mechanism Committee (FMC) / Norwegian Ministry of Foreign Affairs (NMFA) – i.e. check that fields [1.12] and [1.13] in part I on worksheet 'Summary' have the same value. If they do not, adjust the scheduling of the in-kind co-financing (for more details about scheduling of in-kind contributions please see an example in appendix 2).

### ***Enter the expense categories***

In part II on worksheet 'Summary':

- Once the activity budgets are in place, categorise the expenditure across all the activities, according to the selected expense categories, and enter into Part II.

Note that this section is essentially an updated version of the data already provided in the Application form.

### ***Enter details of project revenue***

- If the project is revenue-generating, enter details of the annual revenue/ operating expense in the table on worksheet 'Revenue'.

### ***Check the form***

- Verify that no cell on any worksheet is highlighted in red, and that all information provided is correct.

### 3 Detailed description of PIP fields

This section describes the data in the PIP. This data comes from three sources:

- entered by the project promoter
- gathered by the FMO as part of the application and FMO appraisal procedures
- calculated to provide information to the project promoter

#### 3.0 Project Promoter

This section of the PIP is provided for reference, and requires no input from the project promoter. If any of the details in this section are incorrect, then the project promoter should inform the Focal Point without delay.

##### [0.1] Full Legal Name

Populated with the information supplied in Application form associated with this PIP

#### Contact information

##### [0.2] Contact Person

The name of the primary contact for the project. Whilst the vast majority of correspondence between the promoter and the FMO will be via the Focal Point, any direct communication from the FMO to the project promoter will be addressed to this person.

##### [0.3] Job Title

The job title of the person named in [0.2]

##### [0.4] Organisation

The name of the organisation to which the person named in [0.2] belongs. In many cases this will be a department within the Promoter's organisation named in [0.1], but may be a separate entity if the contact person is not part of that organisation.

##### [0.5] Address

The correspondence address for the person named in [0.2].

##### [0.6] Telephone

The fixed line telephone number for the person named in [0.2].

##### [0.7] Mobile

The mobile telephone number for the person named in [0.2].

##### [0.8] Fax

The fax number for the person named in [0.2].

##### [0.9] Email

The email address of the person named in [0.2].

#### 3.1 Part I: Project Summary

This section of the PIP is provided for reference, and requires no input from the project promoter. It aims to provide an overview of the key project parameters, as well as quick reminders if the PIP has not been completed correctly.

##### 3.1.1 General project data

###### [1.1] Project Title

The project title as defined in the application form.

**[1.2] Project Number**

The project number assigned by the FMO on registration of the Application form. All correspondence relating to this project should reference this number.

**[1.3] 1 Euro =**

The exchange rate between the Euro and the local currency of the Beneficiary State that was defined for the Open Call within which the Application form associated with this project was submitted. If the project did not have an open call, this will be the rate agreed between the FMO and the Focal Point.

**[1.4] Final Eligibility Date**

The date after which expenses associated with the project are deemed to be ineligible - as in the Grant Agreement Article 4 Clause 3.

**[1.5] Deadline for final payment claim**

The date by which all payment claims associated with the project must be submitted - as defined in the Rules & Procedures Article 3.1.3.

**[1.6] Planned Start Date**

The month in which the FMO understands that project execution will begin. This date is specified with 'month' accuracy. The three month reporting intervals in Part IV Project Activities will start with the first month of the calendar quarter in which the project execution will begin.

**[1.7] Planned Completion Date**

The month in which the FMO understands that the project will complete. This date is specified with 'month' accuracy, and must not be later than the date in [1.4].

**3.1.2 Summary of overall project funding**

This section has two columns:

- the left hand column repeats information in the Grant Agreement Article 2 referring to the overall project expenditure figures, and the extent to which the project is supported by the Financial Mechanisms
- the right hand column summarises information entered into the PIP

**[1.8] Total cost: awarded by FMC / NMFA**

The total cost of the project, as defined in the Grant Agreement based on the Application form and data collected during the project's appraisal by the FMO. (Grant Agreement Article 2 Clause 3)

**[1.9] Total cost: totals from this PIP**

The total cost of the project, calculated from the expense breakdown in [2.3], [2.4] and [2.7].

**[1.10] Total eligible cost: awarded by FMC / NMFA**

The total eligible cost of the project, as defined in the Grant Agreement based on the Application form and data collected during the project's appraisal by the FMO. (Grant Agreement Article 2 Clause 2)

**[1.11] Total eligible cost: totals from this PIP**

The total eligible cost of the project, calculated from the expense breakdown in [2.3] and [2.4].

**[1.12] Total grant: awarded by FMC / NMFA**

The total grant awarded under one or both mechanisms, as defined in the Grant Agreement based on the Application form and data collected during the project's appraisal by the FMO. (Grant Agreement Article 2 Clause 1).

If the cell is highlighted **in red** then the project as described in the PIP is higher than in the Grant Agreement, please refer to [1.13].

**[1.13] Total to be disbursed: totals from this PIP**

The total amount to be disbursed calculated from Part V: Disbursement Plan (last column of [5.15]).

If the cell is highlighted **in red** then the project as described in the PIP is higher than in the Grant Agreement, i.e. the total to be disbursed is higher than total grant awarded by the FMC / NMFA ([5.15]). This difference must be solved, and it is likely that the cash eligible expenses entered into Part IV – Project Activities are too high. If the total to be disbursed is lower than total grant awarded by the FMC / NMFA an explanation must be given in the text box in point [1.15].

#### **[1.14] Grant Rate**

The ratio of grant awarded by the FMC and/or NMFA to the eligible cost of the project, as defined in the Grant Agreement. (Grant Agreement Article 2 Clause 4)

#### **[1.15] Explanation if total to be disbursed is less than total grant awarded**

The total to be disbursed could be less than total grant awarded for several reasons, e.g. a complete reporting period till the end of the project has not been entered into the PIP ([5.9]) and/or cash eligible expenses entered into Part IV – Project Activities are lower than grant awarded. The latter needs an explanation and the reporting period need to be complete.

### **3.1.3 Summary of funding by Financial Mechanism**

#### **[1.16] Grant awarded – FMC**

The total grant awarded by the EEA Financial Mechanism.

#### **[1.17] Grant awarded – NMFA**

The total grant awarded by the Norwegian Financial Mechanism.

#### **[1.18] Partial Grant Rate – FMC**

The ratio of the grant awarded by the EEA Financial Mechanism to the Total Eligible Cost of the project

#### **[1.19] Partial Grant Rate - NMFA**

The ratio of the grant awarded by the Norwegian Financial Mechanism to the Total Eligible Cost of the project

## **3.2 Part II: Financial Breakdown**

This section of the PIP elaborates on the financial data supplied in the application form.

Both the 'Budget' and 'Financial Resources' tables are structured in the same way:

- columns for expenditure / income per calendar year
- project total for the table row
- this row total as a percentage of another total. The individual row descriptions explain which figures are used to calculate this ratio.

### **3.2.1 Budget – incurred expenses**

#### **[2.1] Cash Eligible Expenses – Budget Headings**

Planned eligible expenses across all project activities should be categorised according to the predefined expense categories (drop down menu) and/or up to four user-defined categories. These eligible expenses should be sorted by the calendar year in which they will be incurred, and entered into the appropriate field.

The '%' column contains the ratio of the total for this expense category to the total cash outflow in [2.2].

#### **[2.2] Total Cash Outflow**

The total eligible expenditure per calendar year summed over all expense categories.

The figure in the 'Total' column is highlighted **in red** if the total from the eligible expense categories is not the same as the total cash eligible expense from activities in [2.3]

## Total Eligible Expense Breakdown (from activities)

### [2.3] *Cash Eligible Expenses*

The cash eligible expenses per calendar year derived from the data entered under the individual activities in Part IV.

When the PIP is completed correctly, the total figure in this line should be identical to the total figure in [2.2].

The '%' column displays the ratio of total cash eligible expenses to total eligible expense

### [2.4] *In-kind Eligible Expenses*

The in-kind eligible expenses per calendar year, derived from the data entered under the individual activities in Part IV.

The '%' column displays the ratio of total in-kind eligible expenses to total eligible expense.

### [2.5] *Total Eligible Expenses*

The total of the cash [2.3] and in-kind [2.4] eligible expenses.

The '%' column will always read '-' or '100.00%', depending on whether any expense figures have been entered under the activities in Part IV.

## Total Project Cost Breakdown (from activities)

### [2.6] *Total Eligible Expenses*

The figures in [2.5] carried forward

The '%' column displays the ratio of eligible expenses to total project cost.

### [2.7] *Non-eligible Expenses*

The non-eligible expenses per calendar year, derived from the data entered under the individual activities in Part IV.

The '%' column displays the ratio of non eligible expenses to total project cost.

### [2.8] *Total Project Cost*

The total of the eligible [2.6] and non-eligible [2.7] expenses.

The '%' column will always read '-' or '100.00%', depending on whether any expense figures have been entered under the activities in Part IV.

## 3.2.2 Financial Resources – eligible expenses funding

The data in this section is derived from Part IV: Project Activities and Part V: Disbursement Plan. Its purpose is to provide an overview of the project funding, in particular which proportion of the funding comes from which source.

As the reimbursal takes place after expenses have been incurred, there is a time lag between expenditure and reimbursal which may mean that expenses incurred in one calendar year are reimbursed in the next.

Only financial resources that offset eligible expenses are considered – the funding of non-eligible expenses does not feature in the PIP.

## Financial Mechanism Financing

### [2.9] *EEA Financial Mechanism*

The grant awarded by the EEA Financial Mechanism per calendar year.

The '%' column displays the ratio of EEA Financial Mechanism funding to total eligible expense funding in [2.20].

**[2.10] Norwegian Financial Mechanism**

The grant awarded by the Norwegian Financial Mechanism per calendar year.

The '%' column displays the ratio of Norwegian Financial Mechanism funding to total eligible expense funding in [2.20].

**[2.11] Total**

The total of [2.9] and [2.10].

The '%' column displays the ratio of total Financial Mechanism funding to total eligible expense funding in [2.20].

## Co-financing from central, regional or local government budget

**[2.12] Cash co-financing**

The cash that must be provided by a government body.

This data is calculated from the Disbursement Plan.

The '%' column displays the ratio of government cash co-financing to total eligible expense funding in [2.20].

**[2.13] In-kind contribution**

The total value of the in-kind contribution per calendar year provided by government bodies, derived from the data entered under the individual activities in [4.7].

The '%' column displays the ratio of the value of government in-kind contribution to total eligible expense funding in [2.20].

**[2.14] Total**

The total of [2.12] and [2.13].

The '%' column displays the ratio of the total of government cash co-financing and the value of government in-kind contribution to total eligible expense funding in [2.20].

## Co-financing from non-government sources

**[2.15] Cash co-financing**

The cash that must be provided by non-government bodies.

The '%' column displays the ratio of non-government cash co-financing to total eligible expense funding in [2.20].

**[2.16] In-kind contribution**

The total value of the in-kind contribution per calendar year provided by non-government bodies, derived from the data entered under the individual activities in [4.8].

The '%' column displays the ratio of the value of non-government in-kind contribution to total eligible expense funding in [2.20].

**[2.17] Total**

The total of [2.15] and [2.16].

The '%' column displays the ratio of the total of non-government cash co-financing and the value of non-government in-kind contribution to total eligible expense funding in [2.20].

## Financial Resources Summary

### **[2.18] Total in-kind contribution**

The total of [2.13] and [2.16].

The '%' column displays the ratio of the value of the total in-kind contribution to total eligible expense funding in [2.20].

### **[2.19] Total cash**

The total of [2.11], [2.12] and [2.15].

The '%' column displays the ratio of the value of the total cash financing to total eligible expense funding in [2.20].

### **[2.20] Total in-kind contribution and cash**

The total of [2.18] and [2.19].

The '%' column will always read '100.00%'

## **3.3 Part III: Project Indicators**

The project indicators define the scope of the project in terms of its objectives. Please refer to document [http://europa.eu.int/comm/europeaid/qsm/documents/pcm\\_manual\\_2004\\_en.pdf](http://europa.eu.int/comm/europeaid/qsm/documents/pcm_manual_2004_en.pdf) for more details on the use of objectives.

The project indicators in the PIP are adapted by the FMO based on those proposed in the Application form, the results of the FMO's appraisal process and a possible dialog with the Focal Point and/or the applicant. Additionally, indicators may be chosen in such a way that there is commonality across similar projects, enabling the benefit of such projects to be compared.

The Indicator column of the tables [3.2], [3.6], [3.10] should define a measurable parameter.

The Baseline column of the tables [3.3], [3.7], [3.11] represents the actual value of this parameter prior to starting the project.

The Target column of the tables [3.4], [3.8], [3.12] represents the intended value of this parameter when the project is successfully completed.

## **3.4 Part IV: Project Activities**

The budget for project activities is established in three month intervals between the planned start date and planned completion date of the project. The three month reporting intervals will start with the first month of the calendar quarter in which the project execution will begin. Note that the interval for budgeting is independent of the interval for reporting defined in [5.8] and [5.9].

The PIP enables the entry of categorised activity-related expenses, and calculates a total for the activity for each category.

### **[4.1] Activity Number**

The project promoter will provide the FMO with a figure for the number of activities against which the project promoter wishes to report progress during the FMO appraisal as described in the introduction to this document.

Each activity has a unique number.

### **[4.2] Activity Title**

The title of the activity.

**[4.3] Activity Description**

A brief description of what is involved in the activity, to include as appropriate

- resources required for the activity
- dependencies on other activities
- risks associated with the activity
- description of any in-kind contribution associated with the activity
- description of any non-eligible expenses associated with the activity

**[4.4] Planned Start Date**

The date on which the promoter plans to start this activity.

**[4.5] Planned Completion Date**

The date by which the promoter plans to have completed this activity.

**[4.6] Cash eligible expenses**

The budgeted cash eligible expenses that are uniquely associated with this activity.

**[4.7] In-kind eligible expenses (central, regional, local government budget)**

The budgeted value of any eligible in-kind contribution from government sources that is uniquely associated with this activity.

**[4.8] In-kind eligible expenses (non-government sources)**

The budgeted value of any eligible in-kind contribution from non-government sources that is uniquely associated with this activity.

**[4.9] Non-eligible expenses**

The budgeted cash non-eligible expenses associated with this activity.

**[4.10] Total expenses**

The total of [4.6], [4.7], [4.8] and [4.9].

**3.5 Part V: Disbursement Plan**

The PIP calculates the disbursements to be made by the Financial Mechanism(s) and the required co-finance based on:

- The project budget aggregated across the data entered for the individual activities in Part IV;
- The reporting periods selected by the promoter in [5.8] and [5.9].

The PIP calculates disbursements and co-financing amounts using the following criteria:

- At the end of the project, the actual grant rate must be less than or equal to that approved by the FMC / NMFA in [1.12];
- At no point during the project may the actual grant rate (the ratio of the cumulative disbursement to date to the cumulative eligible expense to date) exceed that approved by the FMC / NMFA in [1.12];
- An advance payment must be offset according to the mechanism defined in [5.6];
- Financial Mechanism funding representing the percentage of the planned total eligible expense defined in the Grant Agreement ([5.5]) will be retained from the last payment claim(s) and disbursed on approval of the Project Completion Report.

These criteria mean that for certain project budgets, it will not be possible to achieve the grant rate set out by the FMC / NMFA. Such budgets will typically involve significant in-kind contributions scheduled for late in the project. For a demonstration of this please refer to Appendix 2.

**[5.1] Total advance payment**

The advance payment approved by the FMC / NMFA defined in Grant Agreement Article 5 clause 3.

**[5.2] Brief description of source of cash co-financing from central, regional or local government budget**

Self-explanatory

**[5.3] Brief description of source of cash co-financing from non-government sources**

Self-explanatory

**[5.4] Percentage cash co-financing from non-government sources**

The disbursement schedule calculates the amount of cash co-financing required to fulfil the criteria described above. The promoter must specify which proportion of this co-financing will come from non-government sources

**[5.5] Percentage of total eligible expenses to be disbursed on approval of Project Completion Report (PCR)**

The percentage set in the Grant Agreement Article 5 Clause 1.

**[5.6] Advance offset mechanism**

The mechanism defined in the Grant Agreement. This can take one of five values:

1. The whole advance is set off against the first payment claim
2. The advance is set off in equal proportions from the first payment claim until 80% of the grant has been spent
3. The whole advance is set off when 80% of the grant has been spent
4. Manual advance offset scheduling
5. Not Applicable

In the first three of these, the PIP calculates the offset for the advance, and adjusts the planned disbursement accordingly. The fourth enables a custom offset schedule to be entered, and the fifth is used if no advance payment is planned.

**[5.7] PIR number**

The PIP provides space for the maximum possible number of PIRs that could be submitted on the project, based on the minimum reporting period duration of three months. If the planned project duration is not a multiple of three months, then at least one period will need to be longer than three months.

It is not mandatory to use the maximum number of PIRs – the PIP enables reporting period durations of up to one year to be selected.

**[5.8] Reporting period start month**

The start month of the period on which a PIR reports. The start month of PIR #1 is always the planned start date of the project. The start month of PIR #<n+1> is always the month following the end month of PIR #<n>

**[5.9] Reporting period end month**

The end month of the period on which a PIR reports. This is selected from a drop-down list, with the shortest reporting period being three months, and the longest being one year. If the end of the project falls within one year, then there may be empty spaces at the bottom of the list – the user will need to use the drop-down scroll bars to access the top of the list.

**[5.10] Likely disbursement month**

The month in which the FMO is likely to disburse funds claimed in this PIR. This is set to three months after the end of the reporting period, and assumes that the Promoter will submit the PIR to the Focal Point at the beginning of the month following the end of the reporting period. The date calculated in this field assumes that the information in the PIR is of a high enough quality to enable timely evaluation of the payment claim – if this is not the case the disbursement date is likely to be delayed.

**[5.11] Advance offset**

The amount of the advance to be offset in a reporting period. This includes both the offset against the Financial Mechanism(s) grant, and the cash co-financing.

This row is read-only, and the data is calculated by the PIP for all offset mechanisms other than 'Manual advance offset scheduling', in which case the user can enter the amounts to be offset in each reporting period.

**[5.12] Disbursement**

The amount that the Financial Mechanism(s) plan to disburse in a given reporting period.

**[5.13] Cash co-financing from central, regional or local government budget**

The co-finance that must be made available in a given period from government sources.

**[5.14] Cash co-financing from non-government sources**

The co-finance that must be made available in a given period from non-government sources.

**[5.15] Disbursement to date**

The planned cumulative funding of the project by the Financial Mechanism(s) from the start of the project to date.

**[5.16] Cash co-financing to date**

The planned cumulative funding of the project by government and non-government sources of cash co-finance from the start of the project to date.

**[5.17] In-kind contribution to date**

The planned cumulative value of in-kind contributions from the start of the project to date.

**[5.18] Total funding to date**

The planned total funding of eligible expenses from the start of the project to date (the total of [5.15], [5.16] and [5.17]).

**3.6 Part VI: Project Revenue**

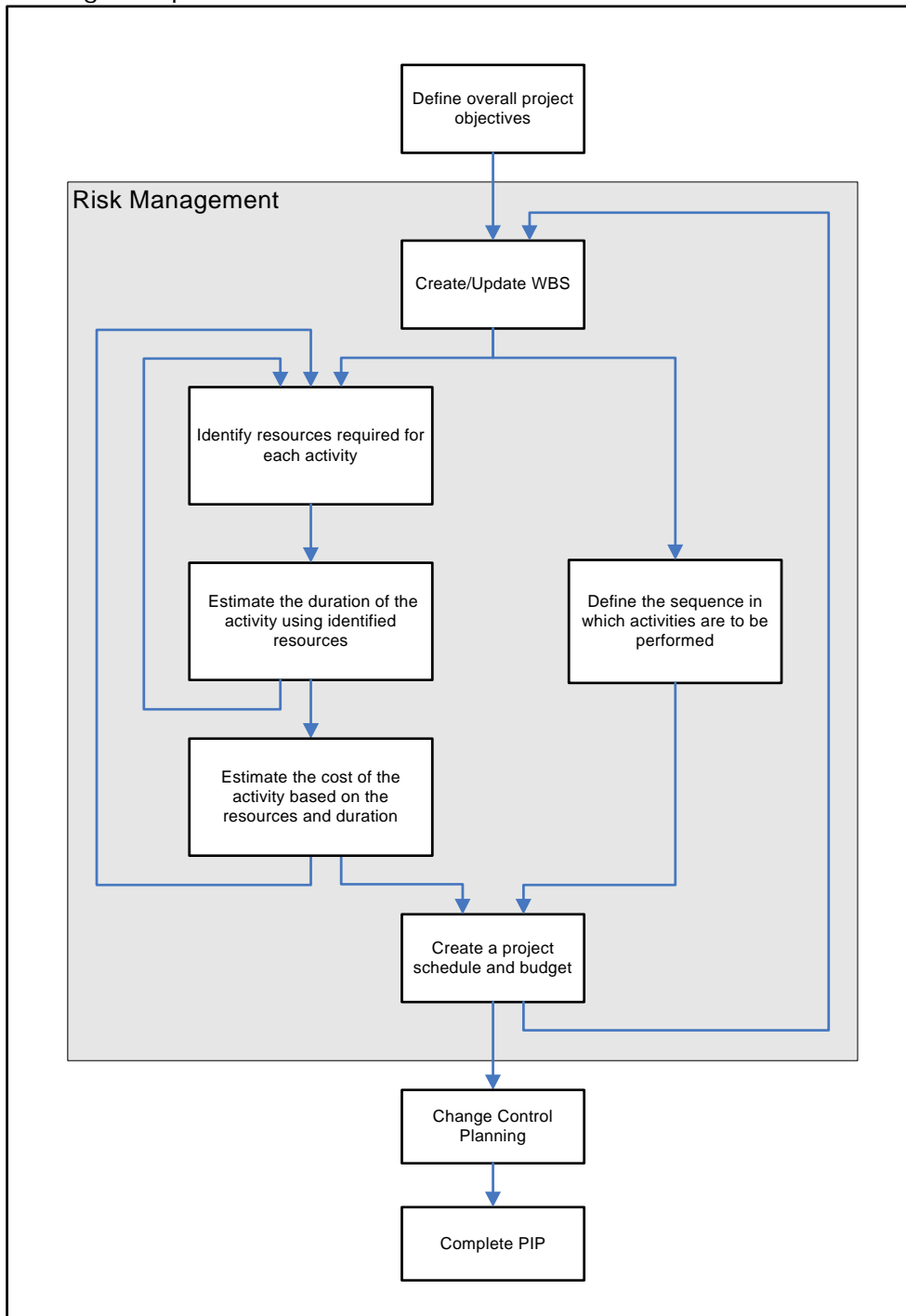
This section is identical to the 'Revenues associated with the project' section of the application form – details of how to complete this can be found in the appropriate version of the 'Application form User Guide', available on [www.eeagrants.org](http://www.eeagrants.org).

## Appendix 1 Recommended project planning techniques

The following diagram shows a simple project planning methodology. Note that the process is necessarily iterative – the more the project is investigated and analysed, the deeper the understanding of the issues achieved by the project manager.

The project management methodology described in this document is a very highly simplified version of that proposed by the Project Management Institute (PMI). This approach is described in detail in the PMBOK, published by PMI.

This document is intended to be an overview, and is in no way a substitute for project management training or experience.



**Figure 4: project planning process**

## 1. Define Project Objectives

Before project planning can start, the overall objectives of the project need to be defined.

## 2. Create / Update Work Breakdown Structure (WBS)

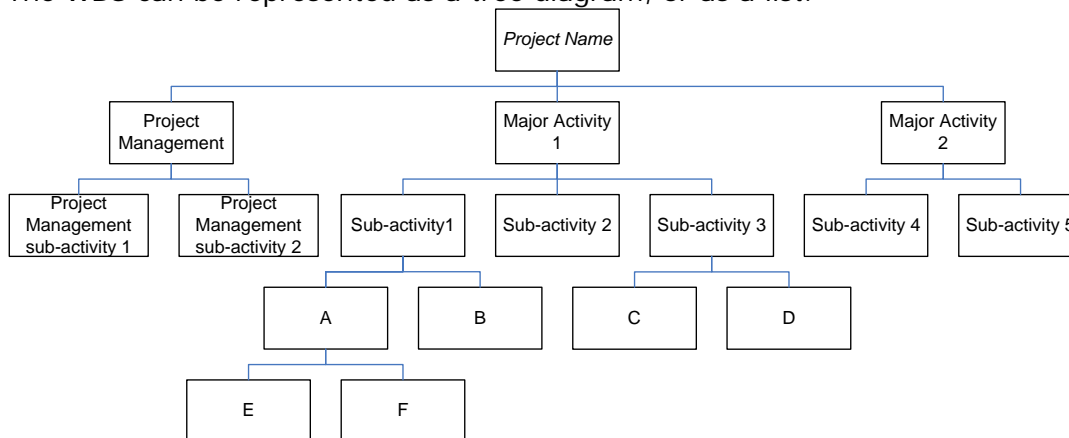
The WBS is the most important document generated by the project planning process. It is a hierarchical description of the project's scope, in terms of the activities required to achieve the high-level project objectives.

Effective use of a WBS can ensure that the project contains the activities required, and only the activities required to achieve these objectives

The WBS:

- Defines the activities to be performed by the project, where activities create measurable outcomes
- Is used as a basis for estimating project cost and duration
- Is used as a reference for measuring project progress
- Obliges project manager to think through the whole project
  - What is to be provided
  - How individual activities contribute to the whole
- Facilitates communication between project stakeholders
- Facilitates allocation of resources to activities

The WBS can be represented as a tree diagram, or as a list:



**Figure 5: example WBS tree**

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## *Project Name*

### **1.1 Project Management**

1.1.1 *Project management sub-activity 1*

1.1.2 *Project management sub-activity 2*

### **1.2 Major Activity 1**

1.2.1 Sub-activity 1

1.2.1.1 A

1.2.1.1.1 E

1.2.1.1.2 F

1.2.1.2 B

1.2.2 Sub-activity 2

1.2.3 Sub-activity 3

1.2.3.1 C

1.2.3.2 D

### **1.3 Major activity 2**

1.3.1 Sub-activity 4

1.3.2 Sub-activity 5

---

## **Figure 6: example WBS list**

The procedure for creating a WBS is as follows:

1. Define the major activities of the project, treating project management as a separate activity
2. For each activity:
  - a. Is it hard to estimate the cost or duration of the activity?
  - b. Is more than one individual or organisational unit responsible for completion of the activity?
  - c. Is this activity dependent on any other activities in the WBS?
  - d. Does the activity contain more than one type of work process?
  - e. Does the activity involve significant risk?
  - f. Will it be difficult to measure the progress of the activity?

If the answer to any of these is yes, then go to step 3, if no, go to step 4
3. Identify logical sub-activities of the activity. For each sub-activity perform step 2
4. Review the activity definition, and refine as necessary

Note that this procedure may be spread out over time, with more detail being added as the scope of the project becomes better understood. At each stage, the project manager should verify that the project objectives are achieved with the activities in the WBS

## **3. Identify Resources**

For each activity at the lowest level of the WBS, identify the resources, both in terms of physical resources (land, energy, materials, machinery etc) and human resources (labour etc) required to complete the activity.

## **4. Estimate activity duration**

Once the resources required to complete an activity have been identified, an estimate of the activity's duration using these resources can be made. If this duration is unacceptable, consider changing the resourcing level to modify the duration

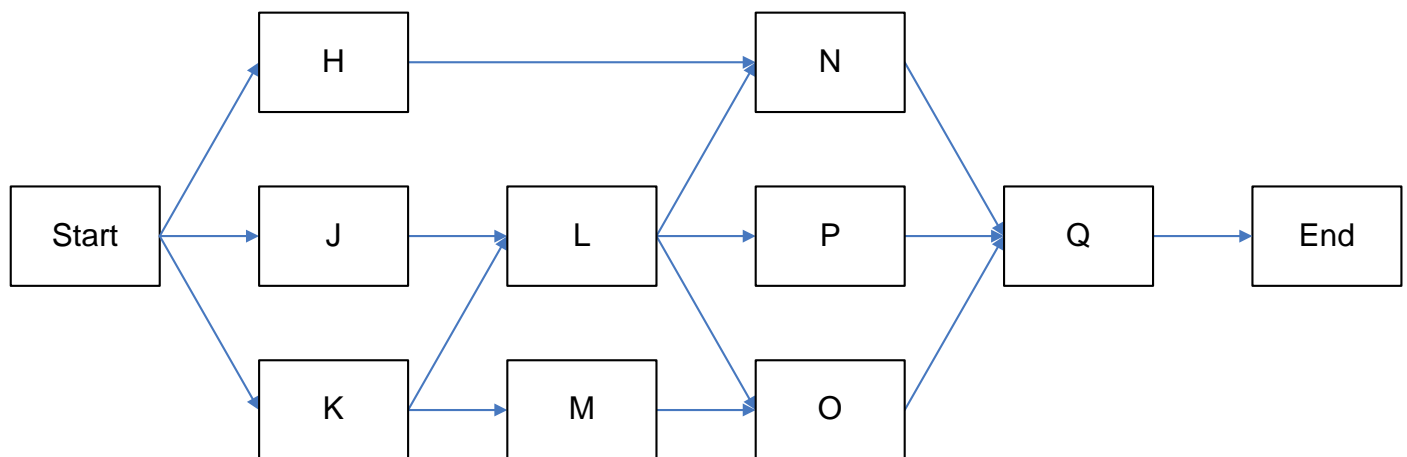
## 5. Estimate activity cost

Based on the identified resources and the activity duration, an estimate for the activity's cost can be made. If the cost is unacceptable, consider modifying the resource level and thus the activity duration

## 6. Define activity sequence

The list of activities defined by the WBS need to be ordered before a project schedule can be developed. Some activities can be performed in parallel; some activities have interdependencies that mean they have to be performed in series.

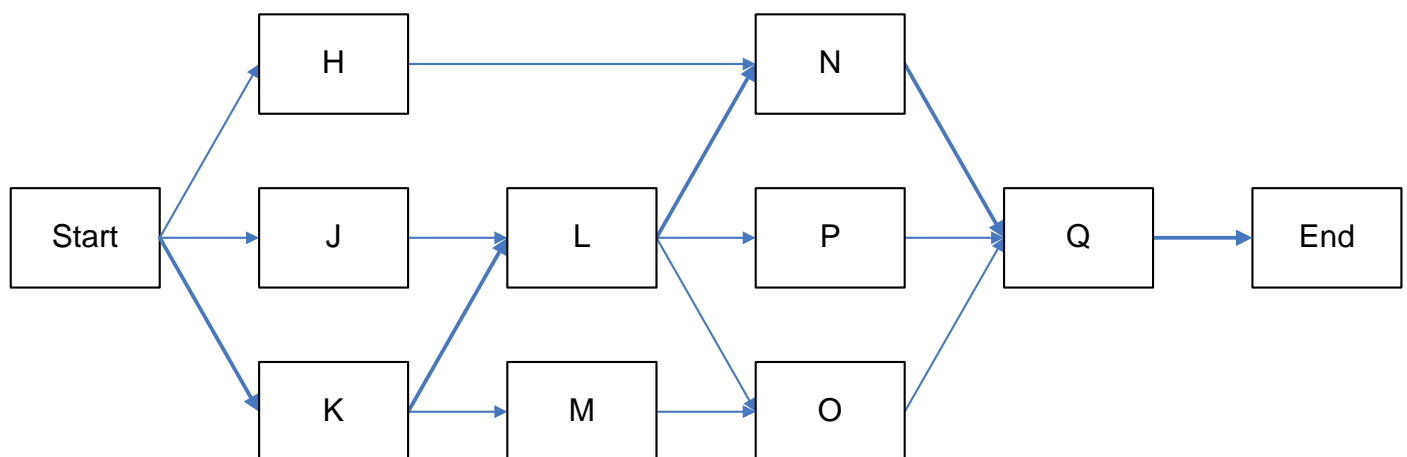
The most common way of defining an activity sequence is by means of a network diagram.



**Figure 7: example network diagram (project tasks represented by nodes)**

## 7. Create project schedule and budget

A project schedule is created by calculating the overall duration of the project based on the sequence of the activities, and thus defining planned start and end dates for each activity. The critical path method is commonly used for this purpose.



**Figure 8: example network diagram showing possible critical path between activities**

It may be that resource or other constraints mean that activities that could logically be performed in parallel have to be serialised – in this case it will be necessary to modify the activity sequence to reflect such constraints.

With the planned start and finish dates of each activity defined by the schedule, a project budget can be established, detailing the expenditure over the time of the project's execution.

## 8. Risk management

All the preceding activities from the WBS onwards need to be conducted whilst considering the risks to the project. Risks can affect the scope, duration and cost of a project, and risk identification should be an activity that occurs throughout the planning of the project.

Once risks have been identified, their severity should be assessed, typically by evaluating their probability of occurrence and their likely impact, and using a risk rating matrix such as that in Figure 4:

		Risk Probability		
		Low	Medium	High
Risk Impact	Low	<i>Negligible</i>	<i>Low</i>	<i>Medium</i>
	Medium	<i>Low</i>	<i>Medium</i>	<i>High</i>
	High	<i>Medium</i>	<i>High</i>	<i>Extreme</i>

**Figure 9: risk rating matrix**

Risks that are judged to have significant severity should to be addressed by:

- Avoiding the risk by ensuring that it can't occur
- Reducing either the impact or the probability by defining a mitigating strategy
- Transferring the risk to someone else, for example through insurance or subcontracting

Each of these may require a change to the project plan, perhaps through a change to the WBS or the activity sequence.

Less severe risks can also be accepted, typically contingency is built into the project plan to deal with them if they occur.

## 9. Change Control Planning

The procedures to be followed when managing project changes during the execution phase of the project need to be defined whilst planning. Procedures should be defined for changes to the scope, changes to the schedule, and changes to the cost of the project. These procedures typically describe the authorisation required and the resulting actions when changes of varying magnitudes occur.

## Appendix 2 Example of the effect of the scheduling of in-kind contributions on the actual grant rate

Consider the following project:

- planned duration one year, with PIRs (Project Interim Report) submitted every three months
- planned total eligible expense €1,000,000
- Approved grant rate: 85%
- No advance payment
- 0% retained for PCR (Project Completion Report)

If the eligible expense is entirely in cash, then the grant rate will of course be maintained.

	PIR 1	PIR 2	PIR 3	PIR 4
Cash eligible expense	€250,000	€250,000	€250,000	€250,000
In-kind contribution	€0	€0	€0	€0
Disbursement [5.12]	€212,500	€212,500	€212,500	€212,500
Cash co-finance [5.13]+[5.14]	€37,500	€37,500	€37,500	€37,500
Cash expense to date [5.15]+[5.16]	€250,000	€500,000	€750,000	€1,000,000
In-kind contribution to date [5.17]	€0	€0	€0	€0
Total funding to date [5.18]	€250,000	€500,000	€750,000	€1,000,000
Cash expense/ total expense	100%	100%	100%	100%
Running grant rate	85.0%	85.0%	85.0%	85.0%

If the project consists of €950,000 cash eligible expense, budgeted evenly throughout the project and an in-kind contribution, valued at €50,000 reported in the first three-month period, then although the grant rate is below that awarded by the FMC / NMFA in the first reporting period, subsequent periods compensate.

	PIR 1	PIR 2	PIR 3	PIR 4
Cash eligible expense	€237,500	€237,500	€237,500	€237,500
In-kind contribution	€50,000			
Disbursement [5.12]	€237,500	€208,750	€201,875	€201,875
Cash co-finance [5.13]+[5.14]	€0	€28,750	€35,625	€35,625
Cash expense to date [5.15]+[5.16]	€237,500	€475,000	€712,500	€950,000
In-kind contribution to date [5.17]	€50,000	€50,000	€50,000	€50,000
Total funding to date [5.18]	€287,500	€525,000	€762,500	€1,000,000
Cash expense/ total expense	82.6%	90.5%	93.4%	95%
Running grant rate	82.6%	85.0%	85.0%	85.0%

If the project consists of €950,000 cash eligible expense, budgeted evenly throughout the project and an in-kind contribution, valued at €50,000 reported in the *last* three-month period, it is not possible to compensate as there are no more reporting periods.

	PIR 1	PIR 2	PIR 3	PIR 4
Cash eligible expense	€237,500	€237,500	€237,500	€237,500
In-kind contribution	€0	€0	€0	€50,000
Disbursement [5.12]	€201,875	€201,875	€201,875	€237,500
Cash co-finance [5.13]+[5.14]	€35,625	€35,625	€35,625	€0
Cash expense to date [5.15]+[5.16]	€237,500	€475,000	€712,500	€950,000
In-kind contribution to date	€0	€0	€0	€50,000

[5.17]				
Total funding to date [5.18]	€237,500	€475,000	€712,500	€1,000,000
Cash expense/ total expense	100%	100%	100%	95%
Running grant rate	85.0%	85.0%	85.0%	84.3%