Project Management in Public Health in Europe
FOREWORD

The European Union Health Programme was launched in 2008 as an instrument to implement the EU Health Strategy, “Together for Health”. This is the EU’s strategy to protect health today and prevent problems of the future. The Health Programme covers the period 2008-2013 and it has three objectives: improving health security, promoting good health - including reducing health inequalities - and generating and disseminating health information and knowledge.

The current Health Programme is managed by the European Commission together with the Executive Agency for Health and Consumers. It has so far funded over 200 projects and other actions.

The selection of proposals is very important to us and they must undergo rigorous evaluation. A key to the success of any project is good planning at the outset and efficient project management. The same applies if we want to ensure long-term success of projects once funding has ceased.

This brochure offers guidance on the creation of proposals to be submitted for funding under the health Programme and their management. It provides useful information on the definition and eligibility of a project and offers ideas on evaluating and promoting projects, managing resources and disseminating the results of projects. Such information should be particularly useful for beneficiaries and potential applicants.

Further information is available at: http://ec.europa.eu/eahc.

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Introduction

The EU Health Programme

Although the capacity for health in Europe is mainly held by the Member States, the EU has the responsibility to undertake actions that complement the work done by Member States. These responsibilities are set out in Article 168 of the Lisbon Treaty and include issues related to cross border health threats, patient mobility, promoting health and reducing health inequalities.

To act on these responsibilities, the European Commission in 2007 adopted the Strategy “Together for Health: A Strategic Approach for the EU 2008–2013”, to provide an overarching strategic framework spanning core issues in health, health in all policies and global health issues, to guide future work on health at the European level and to put an implementation mechanism in place to achieve those objectives, working in partnership with Member States.

The instrument to implement the Health Strategy is the Community Action Programme for Public Health. In conformity with the Treaty, the programme is “an incentive measure designed to protect and improve human health, excluding any harmonisation of the laws and regulations of the Member States”. It aims to embody an integrated approach towards protecting and improving health, inter-linking activities such as networks, co-ordinated responses, sharing of experience, training and dissemination of information and knowledge.

A first Action Programme was adopted by the European Parliament and the Council in 2002 and ran from 2003 to 2008. The second Programme came into force in 2008 and will run until 2013. Both Action Programmes focus on three general areas or “strands”: health information, rapid reaction to health threats and health promotion through addressing health determinants.

Institutions, associations and organisations in the health field are encouraged to participate in the Health Programme by implementing actions focusing on priorities within these strands, defined on an annual basis by the Commission. To ensure their participation, a variety of funding mechanisms are offered, including project grants, tendering, conference grants, operating grants for non-governmental organisations or specialised networks and joint financing of actions by the Community and one or more Member States.

Apart from conferences and operating grants, most of these financing mechanisms entail the organisation of the actions to achieve the Programme objectives in the form of projects. This manual is intended to provide guidance for setting up and implementing actions that entail a project approach.

To guarantee that projects funded within the Health Programme meet quality standards is the task of the Executive Agency for Health and Consumers (EAHC).

The role of the Public Health Executive Agency

This Agency, formerly known as the Public Health Executive Agency, was established in 2005, with a view to implementing the European Commission’s Public Health Programme. The Agency is entrusted with the overall technical and financial responsibility for many parts of the Programme’s implementation and the management of all the phases of projects and tenders funded under the Programme.

This includes the:

• Launch of annual calls for proposals;
• Evaluation, negotiation and contracting of grant agreements;
• Management of projects awarded for co-funding;
• Opening of service contracts and calls for tender;
• Dissemination of know-how and best practice generated by the projects;
• Fostering of exchange and coordination between all players involved and with other Community and national authorities;
• Provision of feedback on project results to the Health and Consumer Protection Directorate-General (DG SANCO), policy makers and other stakeholders in order to improve the Public Health Programme.

DG SANCO and EAHC collaborate closely in the execution of their tasks through meetings at both managerial and technical levels and through the agency’s reporting structure.
What is a project?

A project is a systematic, goal-oriented, temporary and one-time endeavor, undertaken to create a unique product or service. In this definition, “temporary” does not mean that a project is necessarily short in duration, but that it has a fixed start and end date. “Unique” means that the product or service that results from the project should be different from what existed previously.

With this definition, a project can be conceived as a particular method of organizing the work that must be done to achieve predefined objectives.

Organizing work in the form of a project is different from routine work, in the sense that it does not involve the application of implicit or explicit procedures which already exist in the organization to regulate the day-to-day work. On the other hand, a project based approach is also different from improvisation. While the latter is sometimes required to find immediate or makeshift solutions for ad hoc problems or crisis situations, it is often chaotic and not always effective.

As such, a project is a particularly useful way to introduce innovations, address new challenges or find solutions for problems that the existing procedures and routines do not accommodate.

Because of its systematic and goal-oriented nature, a project based approach is generally much more effective than improvisation. However there is a drawback: projects are also very time-consuming and costly, and therefore less efficient than routine work. That is the reason why projects should be limited in time, and why the results of project work should ideally be integrated in routines after the project has been finalized.

Types of projects in public health

One of the main defining characteristics of a project is its orientation towards pre-defined objectives. These objectives are so important that depending on their nature, different types of projects can be distinguished.

- Research projects are primarily aimed at increasing knowledge that can serve as a basis to make “evidence based” decisions. Subtypes of research projects that are most common in public health are diagnostic or problem identification projects, which are mainly concerned with the identification of the (health) problem(s) in a given population and of the factors that contribute to these problems, and evaluation projects, which aim to assess the quality and effectiveness of an intervention by looking at the process of implementation, the short term outputs and the long term outcomes. Although evaluation should be an essential component of any project, a specific assessment of the outputs and outcomes and/or implementation quality of an intervention may be the objective of a project in its own right.

- Development projects involve the development and pre-testing of an intervention to address a particular problem in a particular population or target group. This type of project essentially relies on a detailed problem analysis, resulting in the selection of relevant objectives and of intervention strategies with a demonstrated or expected effectiveness.

- Implementation projects are concerned with the wider dissemination and implementation of an existing intervention in a particular target group or population. They involve a careful analysis of the target group and implementation conditions, and usually require the involvement of third parties (intermediaries) who are familiar with the target population and the local context in order to support the implementation process. Depending on the specific objectives of the implementation, a distinction can be made between demonstration projects which aim to set an example and demonstrate the effectiveness of a given approach, and large scale implementation projects, which aim to reach as large a part of the target group as possible. A particular form of implementation projects in public health are community projects, which follow a bottom-up approach and put a strong emphasis on participation by community stakeholders.

- Combined projects involve a combination of several of the project types outlined above, to reach a range of objectives. Often, these projects contain a number of subprojects with their own objectives, activities and expected outcomes.
The knowledge development cycle in public health

While it is important to distinguish between types of projects on the basis of their objectives, it is obvious that projects should not be stand alone activities. Ideally, they build on each other’s results to contribute to the broader picture.

The linkage between various types of projects is known as the knowledge development cycle. This cycle, as applied to public health, is given below.

Each type of project not only has different objectives, but also different indicators to determine whether they perform well:

- For research projects, the main performance indicator is the quality of the data collection and knowledge base;
- For development projects, the main performance indicator is the effectiveness of the interventions;
- For implementation projects, the main performance indicator is the effect on the target groups and population.

The type of project also defines other project qualities, such as the methodology to be used, the evaluation and dissemination strategies, the style of management, the time and the budget needed for the project and the relevance of the project for a given programme or context. These elements taken together are referred to as the scope of a project. This term stands for the common understanding as to what is included in, or excluded from, the project and includes a general idea about the project objectives and the activities that are envisaged.

The quality of public health projects

Regardless of their objective and scope, projects funded within the EU Health Programme should adhere to certain quality standards. The quality of a project depends on three elements: the relevance of the products or services that are created; the technical and methodological quality with which these results or services are produced; and the way in which this process is managed.

Applied to projects funded within the EU Health programme, these issues can be specified as follows.

- The relevance of a project refers to both the policy relevance and the strategic relevance of a project. A project is policy relevant when it contributes to the objectives and priorities of the EU Health Programme and its annual work plan.

### Box 2: The knowledge development cycle for public health

<table>
<thead>
<tr>
<th>Type of project</th>
<th>Research Projects</th>
<th>Development Projects</th>
<th>Implementation Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus</strong></td>
<td>Identification of health problems</td>
<td>Identification of risk factors</td>
<td>Developing interventions + Evaluation of effects</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td>Gain insight into – Incidence – Prevalence – Distribution – Trends of health problems</td>
<td>Identify risk factors and their determinants</td>
<td>Develop and/or adapt effective intervention methods and instruments</td>
</tr>
<tr>
<td></td>
<td>Set thematic priorities</td>
<td>Identify effective intervention methods and instruments</td>
<td>Pilot test in controlled conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set strategic priorities</td>
<td>Enhance participation of health workers or intermediaries</td>
</tr>
<tr>
<td><strong>Performance indicators</strong></td>
<td>Quality of data collection and knowledge base</td>
<td>Effectiveness of interventions</td>
<td>Dissemination participation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Effects on target group</td>
</tr>
</tbody>
</table>

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It is strategically relevant when it contributes to the existing knowledge and implications for health and provides added value for public health at European level. In addition, projects should also have a geographical coverage that is commensurate with the project objectives and should be in accordance with the social and cultural context.

- The **technical quality** of a project refers to the quality of the evidence base; the specification of aims and objectives, target groups, methods, anticipated effects and outcomes; and the innovative nature of the actions that are envisaged. A high quality project also complements existing actions, avoids duplication and pays attention to evaluation and dissemination.

- The **management quality** of a project refers to the planning and organisation of the project activities. High quality project management requires a sufficient level of organisational capacity of the applicants, strong partnership, an adequate communication strategy and appropriate financial management.

To ensure that these quality standards are met, the EC applies strict selection criteria to decide on the co-funding of projects within the Health Programme. Project applications are carefully selected using a peer review procedure, applying pre-defined criteria related to the policy and strategic relevance, technical quality and management quality of proposed projects.

**The evidence base of public health projects**

Evidence-based public health can be defined as the application of principles of scientific reasoning, including the systematic and appropriate use of data and information systems and of behavioural science theory and programme planning models, for the development, implementation and evaluation of effective programmes and policies in public health. The “evidence base” for a public health project includes the following elements:

**Analysis of the health problem and its impact on quality of life and on society**

Projects funded within the Public Health Programme should contribute to solving of a relevant public health problem. The term “problem” can be defined broadly: it can refer to a specific health condition, or to social problems which affect the quality of life of a patient, consumer, student, or community. For a problem to be considered as relevant, its nature and importance for public health must be documented. The nature of a health problem is given by the problem definition and/or problem diagnosis. The importance of a problem must be shown in terms of its incidence and prevalence, its distribution in the population, its evolution over time (i.e., increasing or decreasing prevalence), and its seriousness. The latter can be inferred from the (objective) physical consequences, the impact on (subjective or perceived) quality of life, and the socio-economical impact on society.

**Analysis of the factors underlying the problem**

Health problems are typically caused by a combination of human biology, quality of health care, lifestyle and the physical and social environment. Risk factors as well as protective factors may be identified within each of these groups and their cause and effect relationship with the problem of interest must be explained.

Further, an analysis must be provided of the processes and conditions which underlie these factors. These so-called problem determinants can be divided into **predisposing** factors, which enhance the likelihood that a risk or protective factor will be present problem behaviour will occur (e.g., genetic make-up for biological conditions; knowledge, attitudes, beliefs as motivators of health related behaviour, etc.); **enabling** factors, which increase the likelihood that these predispositions will be acted upon (e.g., resources, policies, services); and **reinforcing** factors, which encourage persistence by providing rewards and incentives (e.g., support, praise, gain). For the identification of these determinants, reference should be made to existing models from biostatistics, behavioural epidemiology and the social and behavioural sciences.

**Evidence of the effectiveness of proposed measures**

Interventions in public health may involve a range of strategies, including the organisation of health care, case finding, screening, health education, community organisation and development, social marketing, communication, adult learning, and advocacy. The choice for a particular strategy for a public health project must be supported by evidence regarding its effectiveness in addressing the problem determinant(s) of interest. This evidence is typically provided by reports of evaluation studies. The “value” of this evidence depends on the research design that has been applied to study the effects. The traditional hierarchy of research designs for evidence is given in the “evidence pyramid” given below.
This hierarchy has its origins in the evidence-based medicine movement in health care and gives a clear priority to systematic review syntheses of primary research based on randomised controlled trials (RCT). Evidence based medicine has been well defined and its processes developed in the last decade. However, when applied to wider public health interventions, the pre-eminence of the RCT design is controversial and is seen as inappropriate for evaluating complex community based interventions. The inability of complex interventions to use the RCT design to demonstrate effectiveness may have weakened the position of public health in policy, with policy-makers taking the often but wrongly held position that a lack of evidence of effectiveness equates to evidence of no effect. Some researchers have therefore suggested broadening the notion of “evidence” by looking at influences on systems and structures as well as individuals. The collection of information then covers the arenas of policy and practice as well as research, and different layers of information sources may be included to ensure that the end report (review) is useful and applicable for multiple end-users, researchers, practitioners and policy makers.

If no empirical evidence of effectiveness is available yet for a given type of intervention, prior development and pre-testing of an intervention based on the available theoretical know-how should be considered.

Evidence of applicability in the proposed context
In addition to the analysis of the problem and possible interventions, an evidence-based approach also entails the analysis of the context in which the intervention will take place. This context analysis should look at elements in the environment which may facilitate or hinder the project implementation process, allowing for a tailoring of the intervention to the specific characteristics, needs and problems. At the organisational level, the context analysis should identify existing resources, potential partners, and already existing actions in the community in which the intervention takes place. This may include a stakeholder analysis or the identification of all stakeholder groups who are likely to be affected (either positively or negatively) by the proposed intervention and of their interests, problems and potential to contribute to the project. At the macro level, the context analysis should consider the broader social, cultural and policy context, both within and across policy areas, to identify trends, opportunities and threats which may impact on the success of the project.

Planning models
To help with the planning and implementation of public health projects, several planning models have been elaborated. These models typically detail a series of steps project planners or managers need to go through, guiding them through the planning and implementation process.

Planning Framework for Public Health Practice (NPHP, 2000)
This framework is a tool to improve planning and management in public health, drawing from the common elements in existing planning processes in public health to effect rigour and consistency in intervention planning. The framework entails 6 steps:
1. Identify the determinants of the health problem, the context in which they operate and the population groups affected;
2. Assess the risks and benefits posed by each determinant to identify what should be addressed;
3. Identify intervention options and appraise them including the level of evidence;
4. Decide the portfolio of interventions that can address the problem;
5. Implement the portfolio;
6. Evaluate the portfolio.

Precede-Proceed (Green and Kreuter, 2005)
This model is the most widely used model in health promotion planning. It provides both a guideline for the planning and implementation of interventions and a format for identifying factors related to health problems, distinguishing between three categories of factors that contribute to health behaviour:
1. Predisposing factors, which motivate an individual or group to take action (e.g., knowledge, beliefs, attitudes, values, cultural norms, etc.);
2. Enabling factors, representing personal skills and available resources needed to perform a behaviour; and
3. Reinforcing factors, providing incentives for health behaviours and outcomes to be maintained.

1 A “community” is defined as a group of people, often but not necessarily living in the same locality, who share common interests.
An understanding of these three factors allows us to identify priorities and provides a basis for where we should focus our efforts.

**Intervention mapping (Bartholomew et al, 2006)**

Intervention Mapping is a framework for health education intervention development, composed of five steps:

1. Creating a matrix of proximal programme objectives;
2. Selecting theory-based intervention methods and practical strategies;
3. Designing and organizing a programme;
4. Specifying adoption and implementation plans;
5. Generating programme evaluation plans.

**Further reading**


CHAPTER 1

1. The Importance of Project Planning

What is project planning?

Planning entails a series of decisions, from general and strategic decisions to specific operational ones, based on the gathering and analysis of information. The field of planning encompasses a broad range of different approaches, including strategic planning, programme planning and operational planning.

Project planning is a form of operational planning, whereby the consecutive steps to implement the project activities are carefully mapped out, based on an analysis of relevant information and linked to the program in which the project takes place and to which it should contribute. Essentially, project planning involves establishing the scope, aims and objectives of a project, the way in which the project will be performed, the roles and responsibilities of those involved, and the time and cost estimates. It answers questions such as:

- What are the project objectives?
- What will be done to reach the project objective?
- How will it be done?
- Who will do it?
- When will it be done?

The output of the project planning process is a project plan that will be used by the project manager(s) to implement the activities, monitor the progress and make decisions.

Why is project planning important?

Project planning is essential for a project’s success, and as such is often considered the most important phase in project management.

By establishing the scope, aims and objectives of a project and mapping out the procedures, tasks, roles and responsibilities, project planning helps to reduce the main pitfalls leading to project failure, such as:

- Selecting an unimportant problem;
- Not addressing the key determinants of the problem;
- Not choosing the best intervention strategy to address the problem determinants (e.g. choosing solutions that are not supported by evidence, or reinventing the wheel);
- Choosing interventions that are not sufficiently adapted to the target group or context;
- Poor quality of implementation;
- Not performing the right kind of evaluation (e.g. wrong evaluation level or poor evaluation methodology);
- Insufficient dissemination (e.g. poor visibility of the project, or insufficient results sustainability).

On the other hand, establishing the scope, tasks, schedules, risks, quality and staffing needs helps project team members to understand their roles and responsibilities. As such, the effort spent in planning can save countless hours of confusion and re-work in the subsequent phases. The time spent properly planning will result in reduced cost and duration, and increased quality over the life of the project.

Who should be involved in the planning process?

The involvement of internal and external stakeholders from the start of the project is critical to achieving optimal results. Stakeholders are those people who hold a stake in the project – they are people who are interested in the project’s outcome. Anyone who might be affected by the project could be regarded as a stakeholder.

It is important to identify your stakeholders so that you can understand their points of view and get an idea of the pressure they will try to exert on your project. Failure to involve stakeholders may lead to decisions being overruled, delayed, challenged or questioned afterwards.

Project planners must therefore identify the key stakeholders and consider their roles from the outset. Key stakeholders may include:

- The project team;
- Partners;
- Sponsors;
- Politicians and decision makers;
- Representatives from the target community or target group;
- The media, the scientific community, civil society group, etc.

To identify stakeholders and manage their involvement in the project, it is useful to draw up a project organization chart. This is a simple graphical illustration of who is involved in the project and where they fit in the overall organizational plan. A project organization chart is created by:

- Writing down the names of everyone who is involved in the project;
- Grouping them according to their roles – project board members, stakeholders, and project team members. In most cases, you will need to split the stakeholders’ group further into the various stakeholder categories;
- Charting the results graphically, with project board at the top, the project team in the middle, and stakeholders radiating out from them. If some of the stakeholders report to the project board members, it may be worth indicating this on the chart.
CHAPTER 1

Deliverables from the project planning process

There are three major deliverables from the project planning process:

- The **project definition** describes all aspects of the project, such as the scope, objectives and method. Once approved by the relevant stakeholders, it becomes the basis for the work to be performed;
- The **project work plan** provides step-by-step instructions for constructing project deliverables and reaching outcomes;
- The **project management procedures** describe the procedures that will be used to manage the project. It will include sections on how the team will manage issues, scope change, risk, quality, communication, etc. It will also make use of the project organisation chart.

Further reading


2. Key Elements of a Project Plan

What is a project plan?
A project plan is the result of the process of project planning. It establishes the scope, aims, objectives and method that will be used for the project, as well as the way in which the project activities will be performed, the roles and responsibilities of those involved and the time and cost estimates. The project plan will serve as a basis for the project manager(s) and project team to monitor the project’s progress and to make decisions.

Key elements of a project plan

Rationale
A project plan should start with a clear and concise argument explaining why the project is important. This does not need to be long or detailed, but should make a convincing business case for the work to be done. The rationale should preferably be evidence based and include:

- An outline of the importance of the (health) problem(s) and their context;
- An analysis of the main problem determinants;
- A review of possibilities for interventions with their likely effects and applicability.

As projects should not duplicate existing initiatives, it is also important to give an outline of what has been done to date, in previous or parallel initiatives, and how the current project will build on this.

Aims and Objectives
The aim or goal of a project is a broad statement of the problem the project intends to solve. The aims may not necessarily be fully achieved by the project itself, but the project should contribute to their achievement.

Objectives are derived from the aim, but are more specific, offering concrete statements of what the project will try to achieve in order to reach its aim(s). Objectives should be matched to the problem determinants identified in the problem analysis and should be written at a level which allows them to be evaluated at the conclusion of the project. A well-worded objective will therefore be SMART:

- Specific: it should be clear about what will be achieved;
- Measurable: it should be possible to quantify and measure the results when achieved;
- Achievable: it should be possible to achieve the objective;
- Realistic: the objective should be attainable within the project time and resources;
- Timed: there should be details about when the objective will be attained.

Aims and Objectives are the basis for choosing the method, planning the actions and implementing them. Throughout the project, objectives need to be revisited to monitor the progress towards their achievement. At the end, they will serve to demonstrate to what extent they have been achieved.

Target groups
Target groups are the persons or entities who will be positively affected by the project. They must be distinguished from intermediaries, who are also reached by the project but do not benefit from it. Instead, they are familiar with the target group and are expected to support the implementation process.

A target group specification should provide a definition of the target group, give features and inclusion/exclusion criteria, and provides information about demographic characteristics, needs and social norms with regard to the health problem(s), and the target group size (i.e. the numbers that will be reached by the project). For certain types of interventions it is also useful to segment the target group into subgroups based on relevant characteristics.

Approach and method
This section of a project plan describes the overall approach that will be taken to achieve the objectives. It should not be an elaborate work plan, but a concise description of what will be done and how. It should address:

- The strategy and method to bring about the intended changes. Methods should be explicitly linked to the objectives, in the sense that for each objective at least one intervention method is specified. The choice of methods should be based on the analysis of their effectiveness. Only those methods should be used for which empirical evidence exists that they are effective and which are suitable and acceptable for the target group;
- The scope and boundaries of a project clearly indicate what will and will not be covered. The scope will be defined in terms of deliverables, users, departments, sites, etc. Also consider any constraints imposed by your institution that could affect the scope;
- Critical success factors are factors on which the success or value of the project depends. A project plan should identify 3–4 processes or events that are crucial for the success of the project, emphasising the positive things that need to happen. To define these factors, it may help to think about the stakeholders and their expectations.

Outcomes, outputs and deliverables
Project outcomes are the changes that occur as a result of the project when the objectives are reached. They can be distinguished from outputs, which are products, services,
activities, or attributes resulting from steps in the project implementation process. For example, an output of a vaccination campaign would be the number of people vaccinated, whereas the outcome would be the lower prevalence of the illness against which vaccination is done. Specific types of outputs are deliverables, which are physical items (i.e. reports, plans, tools, products) to be delivered by the project. Internal deliverables are produced for the purpose of executing the project and are usually only needed by the project team and the commissioning authority. External deliverables, in contrast, are created for the target group and stakeholders.

Planning and organisation of the work

While the method gives a general description of the approach that will be taken to achieve the objectives, the planning should provide a comprehensive, logically structured and clearly written outline of the way in which the work will be organised. This should include:

- A detailed description of the different tasks of the project, incorporating both the horizontal tasks of coordination and management of the project (e.g. collection and distribution of information among the partners, monitoring and reporting of progress, communication and decision making within the partnership, etc.) and the vertical tasks, which will lead to the project outcomes;
- A timetable with milestones, i.e. scheduled events signifying important decision making moments or the completion of deliverables, allowing a proper monitoring of the project.

To organise the project tasks, they can be organised in a work breakdown structure or a hierarchical tree structure decomposing a project into activities and sub-activities to help define and control the project and its elements of work. The main building blocks of a work breakdown structure are work packages, which can be considered as sub-projects and are composed of one or more tasks.

Organisation of the partnership

As projects are invariably team work and often involve different organisations, a project plan should pay attention to how these different players will collaborate to pool their expertise and capacities and achieve added value. The description of the partnership should include information about the following issues:

- Extensiveness of partnership;
- Synergy, i.e. the commonality of goals and objectives that could serve as a basis for collaboration within the partnership;
CHAPTER 2

• Network structure: what is the logic for involving specific partners?
• Competence: do the organisations and staff have the competence and expertise required for the project tasks?
• Leadership and authority: what is the division of responsibilities and tasks between the different partners in the project;
• Resource planning.

Poor management of budgets and other resources may lead to unanticipated costs and even an inability to complete the project. It is therefore essential to make a careful estimation of the costs for the project and to provide for resources. Resource planning entails estimating the expected input in terms of human and financial resources necessary to achieve the project objectives.

This includes:
• Human resource planning: a realistic estimation of the staff input, based on an estimation of which type of staff will be required for the tasks that are planned and the anticipated number of working days;
• Financial plan: a realistic estimation of the financial inputs, including a realistic estimation of sources of income (including allocated budgets, project-specific funds, as well as staff time and expertise), and the planning of expenditure over time.

It should be kept in mind that foregoing other opportunities with the organisation, partners, and the community at large are also costs.

Evaluation planning

While setting the direction for the project actions to be undertaken, the project plan also provides a basis for project evaluation. Evaluation refers to the systematic appraisal of the merits of a project, both in terms of the process of implementation and in terms of its effects. As such, the project plan should provide an outline of how the quality of project implementation, outputs and outcomes will be evaluated. This involves the:

• Identification of evaluation needs in consultation with stakeholders;
• Definition of evaluation questions;
• Formulation of appropriate indicators to evaluate the quality of the implementation process and the effects;
• Operationalisation of the indicators (the way in which they will be measured).

Dissemination planning

A project plan should also give an outline of how the visibility and sustainability of the project outputs and outcomes will be maximized. This “dissemination plan” should contain information on:

• What will be disseminated (the message);
• To whom (the audience);
• Why (the purpose);
• How (the method);
• When (the timing).

Further reading


3. Planning of Content Work Packages

What is a work package?

A work package is a building block of the work breakdown structure that allows project management to define the steps necessary for the completion of the work. As such, a work package can be thought of as a sub-project, which, when combined with other work package units, form the completed project. Breaking down the work into work packages allows multiple teams to work simultaneously or sequentially on different components of the project. Each team follows the steps defined in the work package plan and completes them by the specified deadline. When all teams have finished their individual work packages, the whole project comes together and the objectives will have been achieved.

Depending on the kind of tasks, a distinction can be made between the content work packages, which focus on the tasks that will lead to the project outcomes and the horizontal work packages, that are concerned with the management of the project.

Key elements of a content work package

As a work package can be considered as a sub-project, the key elements of a work package resemble those of a project. They include the following:

Work package objectives

Each work package aims to achieve one or more of the project objectives. The description of the work package should start with the statement of those project objective(s) which the work package aims to achieve. As for the project in general, the work package objectives define the methods, actions, and evaluation of the work package outputs and deliverables.

Description of activities

To achieve the work package objectives, a series of activities needs to be undertaken by the project team. The work package plan should describe these activities in a comprehensive, logically structured and clear way. Specifically, attention should be paid to:
• The link between the objectives, methods and activities and outputs and/or deliverables of the work package;

• The link with the objectives, methods and activities and outputs and/or deliverables for the project in general.

**Timetable with milestones**

All activities to be undertaken in the work package must be presented in a realistic timetable, taking into account the fact that some activities must be completed before others may start. In most projects, months are used as the unit for the timing of activities.

In addition to the earliest start date and latest completion date of the work package, the timetable should also define clear **milestones**. A milestone is a scheduled event signifying an important decision-making moment or the completion of a deliverable. Milestones can be used as project checkpoints to validate how the project is progressing, thus allowing a proper monitoring of the project implementation.

**Outputs and deliverables**

The activities of the work package should result in specific **outputs**, which are the products, services, activities or attributes resulting from the activities and linked to the objectives. The work package plan should clearly state which outputs are foreseen.

Certain work package outputs may take the form of **deliverables**. A deliverable is a physical output related to a specific objective of the project, e.g. a report, publication, newsletter, tool, website or conference. A distinction can be made between external deliverables, which are created for customers and stakeholders, and internal deliverables, which are produced for the purpose of executing the project, and are usually only needed by the project team and the commissioning authority. Both types need to be specified and listed in the work package plan.

**Roles and responsibilities**

In multi-partner projects, work packages are usually divided between the organisations which collaborate in the project. Although different organisations can contribute to a work package, it is important that one organisation is in charge. The work package plan should make clear which organisation is responsible for the work package. Furthermore, it should be specified which tasks will be carried out by whom and with whom and who in the organisation will oversee the completion of the work package. This may be a manager, supervisor, team leader, or a designated team member.

**Relationship to other work packages**

Breaking down a project into different work packages is a way to manage the steps that are necessary for the completion of the project and not a way to create projects-within-a-project. Therefore, it is important to ensure the integration of the work of each work package within the broader project framework. The relationship of work package to other (horizontal and content) work packages can be made explicit by stating how the actions build on the results of other work packages and how the outputs and deliverables will be used by others. The interrelation between the work packages can also be made explicit via a Gantt chart, diagram or flowchart.

**Further reading**


4. Planning of Project Coordination

What is project coordination?

Project coordination refers to the planning, monitoring and control of all aspects of a project and the motivation of all those involved in it, to achieve the project objectives on time and to the specified cost, quality and performance. To carry out these tasks, the project partners must set up a management structure and appoint a project manager whose main task is to manage the project effectively.

Key elements of project coordination

Project Plan

The project plan establishes the scope, aims, objectives, and method that will be used for the project, as well as the way in which the project activities will be performed, the roles and responsibilities of those involved and the time and cost estimates. It can thus serve as a basis for the project manager(s) and project team to monitor the project’s progress and to make decisions.

Supporting Plans

To detail aspects of the project plan, supporting plans need to be developed. While the relevance of specific supporting plans depends on the scope and size of the project, relevant supporting plans could include the following:

- **Budget plan** outlining the anticipated costs of the project, considering the various relevant budget posts;
- **Human resource plan**, detailing the number and types of staff to be involved in the project, and estimating their input expressed in the number of work days. If possible, names of people should be provided;
• Communications plan, detailing the ways in which progress will be communicated to the project partners and stakeholders;
• Risk management plan, identifying possible risks to the success of the project and stating contingencies, thus enabling a proactive risk management;
• Evaluation plan, providing an outline of how the quality of project implementation, outputs and outcomes will be evaluated;
• Dissemination plan, outlining how the visibility and sustainability of the project outputs and outcomes will be maximised.

Management structure
Each project should set up a management structure to ensure that effective methods for planning, communicating, and decision making are in place; that the project work is performed on schedule; that deliverables and reports are delivered on time and within the allocated budget; and that the project objectives and outcomes are achieved. Each project should develop a project management framework that works best depending on its scope and the work that needs to be performed. However, the management structure should at least identify a project manager and project team. For larger projects, a management committee could also be appointed. The relationship between these functions can be detailed in an organigram.

Project manager
The role of the project manager varies depending on the scope and nature of the project. Typical tasks for the project manager include:

• Coordinating and managing project work;
• Monitoring project progress and performance;
• Ensuring that project outputs are delivered on time;
• Identifying risks, problems and issues and resolving them as appropriate;
• Managing communication within the project;
• Preparing progress: final and other reports;
• Arranging meetings and writing the minutes;
• Managing project resources, including the budget;
• Coordinating work on any legal agreements (e.g., consortium or license agreements);
• Maintaining the project website;
• Maintaining project documentation;
• Maintaining contact with the sponsors.

To carry out these tasks, project managers should have the necessary skills and capacities. The top 10 qualities a project manager should have are: visionary leadership, ability to communicate with people at all levels, integrity, enthusiasm, empathy, competence, ability to delegate tasks, ability to act under pressure, team building and problem solving capacities. Furthermore, the organisation should provide the manager with the mandate and time to effectively manage the project. Therefore, it is important to have a clear, written agreement on the proportion of time the manager will devote to project management.

Project team
Staffing requirements will have been thought through when writing the project proposal. Staff may work on the project full time or part time. During the project, the programme manager should be informed of any changes in staffing.

Management committee
While the project manager plans the project work and ensures that project outputs are delivered on time, project partners will want to review progress, discuss issues and have input into project decisions. A management committee provides a forum for discussion and decision-making and allows the partners and team members to buy into the project work and spread the responsibility. The management committee may include representative(s) of each project partner organisation, key project staff (e.g., the project manager), project stakeholders, champions, experts, or advisors. The role of the management committee is to:

• Advise the project team and manager;
• Steer and guide the project;
• Review progress and outputs;
• Review outcomes and their impact;
• Represent the interests of the project partners;
• Agree important decisions and changes to plan;
• Discuss risks, problems, issues, and explore solutions.

It is useful to draw up terms of reference for the management committee, so that all concerned understand its role and operation.

Project meetings
An important way to communicate within the project partnership is through organising project meetings. These meetings can serve to inform partners about the project development, deliverables, outputs or issues, plan further steps in the project implementation and facilitate communication and networking between the partners.

Meetings should be organised throughout the project’s lifetime. The rate of meetings can vary, but it is recommended to meet at least once or twice per year. Meetings also can have different purposes:
• A kick-off meeting is the first meeting of the project and typically serves to detail the project objectives, activities and planning, while enabling new partners to make acquaintance;
• Update meetings are subsequent meetings which cover the progress of the project, and enable project partners to share results and knowledge;
• Thematic meetings focus on a topic of interest, e.g. dissemination, evaluation, or standards;
• End of programme meetings are meant to present the results of the project, usually to a broader group of stakeholder.

The project coordination plan should specify the time of each meeting and its purpose. In addition to these meetings it is also possible to hold smaller events for project staff to exchange ideas on common problems or issues to develop strategies. Sometimes it is also necessary for the project manager to meet with partners individually to discuss plans and progress in detail. These meetings are more difficult to foresee and plan, but it is recommended to foresee any possible necessary additional meetings.

Core project documents
A project coordination plan should foresee in a core set of documents that will be needed to guide the project, indicate how the project work will be implemented, report on progress and report the final results. Apart from the project plan and supporting plans mentioned above, these documents also include:

• Minutes of meetings;
• Interim and final reports;
• Terms of reference for the management committee;
• Agreements with partners and other stakeholders (e.g., consortium or license agreements).

The project coordination plan should specify these documents as “internal deliverables” and include them in the timetable.

Further reading


What is an evaluation plan?

Evaluation can be defined as the systematic appraisal of the success of a project. Success refers both to the quality of the project (whether the outcomes meet the needs of the target groups) and its results (whether the project objectives have been achieved). Depending on the purpose of the evaluation, a distinction is usually made between process (or formative) and effect (or summative) evaluation. Process evaluation is done during the project and aims to monitor the implementation process, improve the work in progress and increase the likelihood that the project will be successful. Effect evaluation is usually done towards the end of the project and aims to verify if the project objectives have been achieved.

Planning the evaluation

Although the effects of a project are usually achieved at the end, evaluation must be planned from the outset and conducted throughout the project life time. An evaluation plan specifies which aspects will be focused upon for the evaluation, and explains how the quality of the project implementation and the achievement of the project outputs and outcomes will be assessed. The evaluation plan will serve as a basis for the project manager(s) and project team to monitor the project’s progress and to evaluate the effects.

Key elements of an evaluation plan

Evaluation questions

Evaluation planning starts with the formulation of specific evaluation questions. These questions relate to both the quality of the implementation (process evaluation questions) and the success of the project (effect evaluation questions):

- For process evaluation, the questions should be linked to the planning and organisation of the project activities, focusing on whether the activities are implemented according to plan, how obstacles and difficulties will be identified during the implementation and dealt with and how the quality of the project implementation will be assured;
- For effect evaluation, the evaluation questions should be linked to the specific objectives and should verify if the stated objectives have been achieved.

In stating the evaluation questions it is important to incorporate the stakeholders’ views and focus on what they want to know. This may be assessed directly by asking the stakeholders which questions they would like to see answered for the evaluation, as part of an ‘evaluability assessment’. It is also important to make sure that the questions can be answered unambiguously.

Evaluation indicators

Indicators are variables that measure the performance of a project and the level to which the objectives are reached. By quantifying the evaluation questions, they provide a possibility to measure and monitor the progress of the project and assess the extent to which the objectives are attained.

- Indicators measuring the progress of the project are process indicators. They verify the accuracy and timeliness of the steps foreseen for the project implementation.
- Indicators measuring the project outputs are performance indicators. They relate to the level of participation on the project, user satisfaction, efficiency, take-up, etc.
- Indicators measuring the project outcomes are effect indicators and relate to the achievement of the objectives. If the objectives have been formulated SMART (specific, measurable, achievable, realistic, timed), it should be possible to specify one or more variable measuring the level of achievement of each objective.

Ideally, evaluation indicators are simple metrics that are easy to measure and they should be objective, valid, reliable and repeatable.

Evaluation targets

Indicators can also specify target values (e.g. numbers expected, level of quality aimed for) to serve as a standard to compare the process or results of the project with. These target values may be difficult to define at the start of the project, but setting targets will give the project team something to aim for. Examples of targets are:

- 1,000 users per day will visit the web site;
- 80% of participants in a training session will express satisfaction with the content;
- Patient uptake will improve by 10% in two years;
- 4 out of 5 institutions approached say they will adopt the guidelines.

Evaluation methods

Once evaluation questions have been formulated and indicators specified, it is possible to specify the way in which data will be collected for the evaluation. Methods must be specified for each evaluation question. These methods can be quantitative or qualitative.

Quantitative methods include:

- Questionnaires and surveys – Closed or open-ended questionnaires can be used to ask opinions of participants or target groups in a systematic way. Questionnaires can be mailed out, sent by email or posted on the web;
Records – Records of project activities contain important information about the way the participants react to the project content. Analysing these records facilitates the identification of trends and patterns.

Web server logs – Analysing the use of the project website informs about user trends.

Qualitative methods include:

- Interviews – Structured, semi-structured, or unstructured interviews in person or by phone are useful to explore opinions and issues in depth on a one-to-one basis;
- Focus groups – Group sessions with small groups of people allow to explore different views on an issue, or clarify issues to complement other data collection methods;
- Observation – Observing specific components of the project can be a powerful way to learn about the participants’ responses and uptake of the project;
- Expert opinions – The opinion of experts on specific components of the project can yield objective information on whether the project meets quality criteria.

The adequacy of these methods does not depend on the methods themselves, but on whether or not they will answer the evaluation questions. Moreover, the methods chosen should also match the context for the project implementation and the expectations of the target group and stakeholders.

Timing
Evaluation is done throughout the project. An evaluation plan needs to specify which evaluation aspects will be focused upon at which time. At the start of the project, the focus is likely to be on assessing the stakeholders’ views, the establishment of indicators and the measurement of baseline data for the effect evaluation. During the project, process and performance indicators will be measured at various moments, specified as milestones in the implementation process. Towards the end of the project, effect indicators measures will be assessed to evaluate the project outputs and outcomes.

Further reading


What is dissemination?
Dissemination refers to the process of making the results and deliverables of a project available to the stakeholders and to the wider audience. Dissemination is essential for take-up and take-up is crucial for the success of the project and for the sustainability of outputs in the long term.

Planning for dissemination
To ensure that the project results will be taken up and embedded in the community, a project must develop a dissemination plan that explains how the outcomes of the project will be shared with stakeholders, relevant institutions, organisations and individuals. Specifically, the dissemination plan will explain:

- Why – The purpose of dissemination;
- What will be disseminated – the message;
- To whom – The audience;
- How – The method;
- When – The timing.

Ideally, the dissemination plan will link with a broader dissemination strategy for the programme in which the project is part. It should be planned in consultation with the project partners and approved by the project management committee.

Stakeholder analysis
The dissemination strategy should be based on a stakeholder analysis. A stakeholder is anyone who has a vested interest in the project or will be affected by its outcomes. A stakeholder analysis is an exercise in which stakeholders are identified, listed, and assessed in terms of their interest in the project and importance for its success and further dissemination. Key stakeholders that are really important to the success of the project can act as ‘champions’ to ensure your project has a high profile and that the results are made known.

Key elements of a dissemination plan

Purpose
All dissemination should have a purpose and should support or inform project development in some way. The purpose of the activity may be to:

- Raise awareness – Let others know what you are doing;
- Inform – Educate the community;
- Engage – Get input/feedback from the community;
- Promote – ‘Sell’ your outputs and results.

Defining the purpose of dissemination is a first step to deciding on the audience, message, method and timing of the dissemination.

Audience
The dissemination process depends on who you want to reach and what they can do for your project. Therefore, the different individuals, groups and organisations that will be interested in the project and its results need to be identified and informed. For that purpose, use can be made of the results of the stakeholder analysis. The following audiences may be considered:

- Internal audience: The members of the project consortium and your own institution need to stay well informed about the progress of the project. Adequate internal dissemination can also ensure that the project has a high profile;
- Other projects: Sharing project results with coordinators and key actors of projects dealing with similar topics, both within the programme and in others, will ensure visibility and uptake of results and provide opportunities to receive feedback, share experiences and discuss joint problems and issues;
- External stakeholders: Persons who will benefit from the outcomes of the project, as well as “opinion makers” such as teachers, researchers, librarians, publishers, online hosts, etc., can act as catalysts for the dissemination process;
- The community: It is likely that certain elements of the project, such as guidelines, methods, evaluation criteria, questionnaires, etc., can be used by a wider audience than the specific target group. These elements can be shared with the wider community through articles, conference presentations, case studies, etc.

Message
Once the purpose and audience of the dissemination are clear, the key messages can be defined. To that end, it is useful to keep the communication principles in mind:

- Messages should be clear, simple and easy to understand. The language should be appropriate for the target audience, and non-technical language should be used where possible;
- Messages should be tailored to the receiver(s). It is of paramount importance to carefully consider what they should know about the project. It is possible to send the same message to different audiences, but the relevance of the message to the receiver should be checked each time;
- Messages of different projects related to the same subject can be coordinated to enhance impact;
- Information should be correct and realistic.
Methods

While there are a wide variety of dissemination methods, it is important to select the right one(s) to get your message to the target audience and achieve your purpose.

- Newsletters, flyers and press releases can create awareness about the project.
- Reports, journal articles and websites can transmit information about the project.
- Conference presentations and websites are ways to promote the project and its outcomes.

In addition to more traditional dissemination methods, it can be useful to use less typical strategies. For example, workshops or online discussion lists can yield a higher level of engagement from stakeholders. This may be particularly relevant for conflicting information or information that is likely to meet resistance.

Timing

When planning the dissemination, it is important to decide when different dissemination activities will be most relevant. The ideal timing will depend on the progress of the project as well as on the agenda of the target audience. For instance, at the start of the project, it is best to focus on raising awareness; at the end on highlighting the achievements and deliverables. In terms of the “receivers” agenda, the time commitments of the target audience and stakeholders should be considered. For instance, school or bank holidays should be acknowledged, and when working with universities, it will be difficult to reach academic staff at the start of the term or during examinations.

Evaluation of the dissemination

Like all other elements of a project, dissemination activities are targeted and can be more or less successful. To find out if the dissemination strategy was well chosen and well implemented, it is important to build an evaluation component into all major dissemination activities to monitor the quality and to see if they have achieved their aims. For example, the success of a website can be evaluated by checking the usage logs; training sessions can be evaluated by asking participants to complete an evaluation questionnaire; and publications can be evaluated by the number of citations.

Further reading


CHAPTER 7

7. Resource Planning

What are project resources?
In project management terminology, resources are all the items that are required to carry out the project activities. They include people, equipment, facilities, time, money, or anything else required for the completion of the project. All these elements are interrelated and linked to the scope of the project. Each of them must be estimated and managed effectively if the project is to be a success.

Key project resources

People
People are the most important resources for a project. Managing people means having the right people, with the right skills, at the right time. It also means ensuring that the project staff know what needs to be done, when and how and motivating them to take ownership in the project.

Equipment
The equipment that needs to be managed as part of a project depends on the nature of the project. In public health, the equipment that is needed for the project is usually limited to office material, computers and sometimes test equipment. The project management for equipment is much like for people resources. You have to make sure you have the right equipment in the right place at the right time and that it has the supplies it needs to operate properly.

Time
Time is a critical resource for any project. Project managers who succeed in meeting their project schedule have a good chance of staying within their project budget. To enable time management, the different project activities need to be detailed and prioritized.

Budget
Each project comes with costs and a budget to match these costs. On the income side, the main sources of funding are subsidies, grants, donations and own contributions. On the costs side, the types of expenditure vary according to the nature of the project, but the most common cost factors are staff costs, equipment, travel and subsistence, subcontracting and overheads. The financial management of a project requires that all expenditure must be allocated to a detailed budget, which means that the budget must be carefully planned.

Resource planning
Resource planning entails estimating the expected input in terms of time, human and financial resources necessary to achieve the project objectives.

Time allocation
To allocate time for project activities, use can be made of the Critical Path Method. This technique determines the shortest time possible to complete the project by calculating a critical path or the sequence of project activities which add up to the longest overall duration. To that effect, a model of the project is constructed that includes:

- A list of all activities required to complete the project (typically categorised within a work breakdown structure);
- The time (duration) that each activity will take to complete and;
- The dependencies between the activities.

Using these values, a calculation is made of the longest path of planned activities to the end of the project, as well as the earliest and latest that each activity can start and finish without making the project longer. This process determines which activities are “critical” (i.e. on the longest path) and which have “total float” (i.e. can be delayed without making the project longer). Any delay of an activity on the critical path directly impacts the planned project completion date (i.e. there is no float on the critical path).

A project can have several, parallel, near critical paths. An additional parallel path through the network with the total durations shorter than the critical path is called a sub-critical or non-critical path. A planned critical path of a project can however be shortened by pruning critical path activities, “fast tracking” (i.e. performing more activities in parallel), and/or “crashing the critical path” (i.e. shortening the durations of critical path activities by adding resources).

The work breakdown structure of the project, including the dependencies of the tasks, is often represented in the form of a Gantt chart. This chart is a type of bar chart representing the project schedule and marking the start and finish dates of the main elements of the project.

Human resource planning
Human resource planning for a project involves a realistic estimation of the staff input, based on an estimation of which type of staff will be required for the tasks that are planned, and the anticipated number of working days. To plan the human resources, the following steps should be followed:

- Define the resource requirements by listing the roles and responsibilities for the project, without being constrained by the people that are available. It is often useful to look at previous projects to see what roles and responsibilities existed;
- Look for people to take up the roles and responsibilities. If expertise is not available within the organisation, one can
consider people from outside to assist in particular areas. Other solutions are to train people to increase their skills, or to outsource certain activities via subcontracting;
• In addition to skills, also consider the personalities of people to see if they will be able to work together;
• Consider the impact on the project for each of the solutions outlined above (e.g. time, scope, or budget).

If a responsibility is not allocated, at some point it will escalate into a problem. Addressing it early in the project will avoid or lessen the impact.

Financial planning
A financial plan or budget entails a realistic estimation of the financial inputs, including sources of income (allocated budgets, project-specific funds, as well as staff time and expertise) and the planning of expenditure over time. Each project task will have a cost, whether it is the cost of the staff labor hours, travel costs or the cost of purchasing equipment. In preparing the project budget, each of these costs must be estimated and then totaled. They should be grouped into cost categories:

• Staff costs: a detailed account of the functions required for the scheduled tasks and the related costs (salary per working day and anticipated number of working days);
• Travel and subsistence: a detailed account of the number of trips required for the project, with the cost estimation for travel and subsistence;
• Equipment: a detailed account of the equipment needed for the project, with a cost estimation;
• Subcontracting: an estimation of costs for subcontracted tasks;
• Overheads: usually a fixed percentage of the other costs, listed above.

Some of the estimates will be more accurate than others. For instance, salaries of staff of a given category are usually known, so staff costs can be estimated fairly precisely if the number of working days is known. Other estimates, like travel and subsistence, may be less accurate as the destination is not always known from the onset and prices may change over time. For that reason, organisations often include a contingency amount in the project budget to cover underestimated costs.

Managing resources
The project manager’s job is to keep to the project time schedule and to keep the actual cost at or below the estimated cost and to use as little of the contingency as possible. The most common cause of exceeding the project budget is exceeding the time schedule. Meeting the project schedule does not guarantee that the project budget will be met, but it significantly increases the chances that it will. Apart from adequate planning, the best way to achieve this is to manage the project scope, and to not allow the project scope to “creep” upward without getting budget and/or schedule adjustments to match.

Further reading
What is implementation?

Implementation is the carrying out or execution of a plan, a method or any design for doing something. As such, implementation is the action that must follow any preliminary thinking in order for something to actually happen. In project management terminology, it refers to the process of carrying out the project plan by performing the activities included therein.

The challenge of project implementation

Once a project has been planned, the execution of the work can begin. In theory, this is an easy task: since an agreement already exists on the project definition and work plan, and the project management procedures are already in place, the only challenge is to execute the plans and processes correctly. However, no project ever proceeds entirely as planned. The challenge is therefore to have the rigour and discipline needed to apply the management skills correctly and proactively.

Key elements of project implementation

Manage the work plan
The work plan is the basis for the implementation of the project. Therefore, it needs to be reviewed on a regular basis to determine how the project is progressing in terms of schedule and budget. For a small project, this may need to be weekly. For larger projects, the frequency might be every two weeks.

Monitor the time schedule
As the project activities proceed, activities that have been completed during the previous time period must be identified, and the work plan must be updated to show that they are finished. Also, one should look for activities that should have been completed, but have not been. After the work plan has been updated, it can be determined if the project will be completed within the original effort, cost and duration. If not, the critical path must be revisited, and ways must be found to accelerate these activities to get the project back on track.

Monitor the budget
In monitoring the expenditure, the project manager should look at the amount of money the project has actually consumed and determine, based on the work that has been completed, whether the actual expenditure is more than estimated. If so, a proactive approach must be followed to solve the problem. This may involve working with the team to determine how the remaining work will be completed to stick within the original budget or run the risk that the allocated budget will be exceeded.

Manage risk
Risks refer to potential events or circumstances outside the project team’s control that will have an adverse impact on the project. When the planning work is occurring, the project team should identify all known risks. For each risk, they should also determine the probability that the risk event will occur as well as the potential impact to the project. Those events identified as high-risk should have specific plans put into place to mitigate them to ensure that they do not, in fact, occur. Medium risks should be evaluated as well to see if they should be proactively managed. (Low-level risks may be identified as assumptions. That is, there is potential risk involved, but you are ‘assuming’ that the positive outcome is much more probable.)

Manage issues
In spite of the best efforts at risk management, all projects of any size and complexity will have issues that need to be dealt with and resolved. If one has not done as good a job managing risks, chances are that more issues will arise to deal with. The best practice is to resolve issues as quickly as possible. If there is no urgency to resolve the issue, or if the issue has been active for some time, then it may not really be an issue. It may be a potential problem (risk), or it may be an action item that needs to be resolved at some later point. Issues by their nature must be resolved with a sense of urgency.
Look for warning signs

It is important to always pick up the signs that the project may be in trouble. These could include:

- A small variance in schedule or budget starts to get bigger, especially early in the project. There is a tendency to think one can make it up, but this is a warning: if the tendencies are not corrected quickly, the impact will be unrecoverable;
- Activities that were expected to already have been completed are still being worked on;
- There is a need to rely on unscheduled overtime to hit the deadlines, especially early in the project;
- Team morale starts to decline;
- Deliverable quality or service quality starts to deteriorate;
- Quality control steps, testing activities and project management time starts to be cut back from the original schedule.

If these situations occur, their visibility must be raised through risk management, and a plan must be elaborated to proactively ensure that the project stays on track. If the problems cannot be successfully managed through, an issue must be raised.

Further reading

What is evaluation?

Evaluation can be defined as the systematic appraisal of the success and quality of a project. Success refers to whether the project objectives have been achieved and quality refers to whether the needs of the stakeholders have been met.

Types of evaluation

Depending on the purpose of the evaluation, a distinction can be made between formative (or process) and summative (or effect) evaluation.

Formative evaluation aims to assess initial and ongoing project activities, with a view to improving the work in progress and to increase the likelihood that the project will be successful. It is done at several points during the project implementation, and has several components:

• Needs assessment determines who needs the project, what needs they have and what sort of activities can answer these needs;
• Evaluation assessment determines whether an evaluation is feasible and how stakeholders can help shape its usefulness;
• Implementation evaluation aims to assess whether the project is being conducted as planned, starting from the idea that effects can only be evaluated if the project and its components are operating according to the proposed plan;
• Progress evaluation aims to assess the progress towards meeting the project objectives; it involves collecting information to see if milestones were met and identifying unexpected developments.

Summative evaluation aims to assess the quality and impact of a fully implemented project, and to verify if the project has reached its stated goals. Summative evaluation also has several components:

• Outcome evaluation investigates whether the project resulted in demonstrable effects on specifically defined outcomes;
• Impact evaluation assesses the overall effects (intended or unintended) of the project, including longer term effects;
• Cost-effectiveness and cost-benefit analysis address questions of efficiency by comparing outcomes to the costs of the project.

Steps in the evaluation process

Identify key evaluation points

The first step in an evaluation is to identify the key points that need to be considered for the evaluation. These points can be identified on the basis of the conceptual model underlying the project, and the stakeholders’ views on what kind of evaluation is necessary.

• A good way to capture the conceptual model underlying the project is to use a logic model representing the process from inputs to long-term outcomes. Such a model creates a common understanding about the project’s structure, connections and expected outcomes and can help to focus the evaluation on the most critical elements. In developing a conceptual model, it may be useful to “work backwards,” starting from the desired outcomes and then determining critical conditions or events that will need to be established for these outcomes to occur.
• Key evaluation points should incorporate the stakeholders’ views and focus on what they want to know. This may be assessed directly by asking the stakeholders which questions they would like to see answered for the evaluation, as part of an “evaluation assessment”.

Formulate evaluation questions, indicators and targets

The key evaluation points are the basis to formulate evaluation questions, relating to the quality of the implementation (process evaluation) and the success of the project (effect evaluation).

• Process evaluation questions should be linked to the planning and organisation of the project activities and focus on whether the activities are implemented according to plan, how obstacles and difficulties will be identified during the implementation and dealt with and how the quality of the project implementation will be assured.
• Effect evaluation questions should be linked to the specific objectives and verify if the stated objectives have been achieved.

Next, indicators need to be formulated to quantify the evaluation questions.

• Process indicators verify the accuracy and timeliness of the steps foreseen for the project implementation.
• Performance indicators relate to the level of participation in the project, user satisfaction, efficiency, take-up, etc.
• Effect indicators relate to the achievement of the objectives. If the objectives have been formulated SMART (specific, measurable, achievable, realistic, timed), one or more variables can be specified for each objective to measure the level of its achievement.

Evaluation indicators are variables that should be easy to measure, objective, valid, reliable and repeatable. If possible, target values should be specified (e.g. numbers expected, level of quality aimed for) to serve as a standard to compare the process or results of the project with.
Select an evaluation design

Once the evaluation questions have been formulated and indicators and target values defined, a design can be selected for the evaluation study. Issues to be considered are:

- **Longitudinal or cross-sectional design.** In a longitudinal study, data are collected from the same individuals at different time intervals (e.g. before and after the intervention). In a cross-sectional study, new samples are drawn for each successive data collection. Longitudinal designs are preferred for methodological reasons, but often pose problems related to linking individuals’ responses over time or loss of respondents. Cross-sectional designs may therefore be a valuable alternative. Another methodological choice is whether to use comparison groups to ascertain if the outcomes can be attributed to the intervention;

- **Sampling.** While a large sample will reduce sampling error (i.e. the probability that different results would be obtained with a different sample), the validity of evaluations is also threatened by sample bias (i.e. bias due to loss of sample units) and response bias (i.e. responses or observations that do not reflect “true” outputs). Evaluators should give priority to procedures that will reduce these sources of bias, rather than selecting larger samples;

- **Methods for data collection.** A choice must be made between quantitative (e.g. questionnaires and surveys, records, web logs, counting) or qualitative (e.g. open interviews, focus groups, observations or expert opinions) methods or a combination of both. The adequacy of these methods does not depend on the methods themselves, but on whether or not they will answer the evaluation questions and match the context for the project implementation and the expectations of the target group and stakeholders.

Collect data

Once the evaluation design has been determined, the information must be collected. Both technical and political issues need to be addressed.

- Before data can be collected, the necessary clearances and permissions must be obtained. It is important to find out what the procedures are for data collection in the organisation(s) involved and to address them as soon as possible. Cooperation may be enhanced by offering to give information to the participants on the project outcomes.

- Needs and sensitivities of the participants must be considered. Participants should be clearly informed about how the results will be used. It is helpful to state
explicitly that information will remain anonymous, and that no personal repercussions will result from information presented to the evaluator. If sensitive information needs to be disclosed, even in an anonymous way, informed consent should be obtained.

- When more people are involved in collecting data, they must be trained to operate in an objective, unbiased manner. Ratings or categorisations of data of different assessors for the same event can be compared and inter-rater reliability should be established. Supervision may be required to ensure objectivity.
- To reduce sample bias, efforts must be made to maximise the number of respondents. Non-respondents should be contacted and encouraged to participate, for instance by re-sending surveys, rescheduling interviews or planning observations on multiple occasions. Reasons for non-response should be investigated and systematic differences between responders and non-responders should be explored and their impact on the generalisability of findings noted.
- Evaluation data should be collected in a way that causes as little disruption as possible. Schedules and sensitivities of the target group should be paid attention to and approaches may need to be changed if necessary.

**Analyse data**

Once the data are collected, they must be analysed and interpreted. The type of analysis to be performed will depend on the nature of the data (e.g. qualitative or quantitative), but regardless of the actual analysis the following steps should be followed:

- **Checking of raw data.** Before the actual analysis takes place, data should be checked for responses that are out of range or unlikely (e.g. always giving the same answer), with a view to eliminating problematic responses or items from the data set;
- **Preparation for analysis.** To prepare the data for analysis, they must be coded and entered (keyed or scanned) in a data set. Quality control of the data set should also be performed;
- **Conduct initial analysis.** The next step is to perform the analyses foreseen in the evaluation plan. For the analysis of quantitative data, statistical programs are widely available. For qualitative data, computerised systems offering the possibility to analyse narrative data are also becoming increasingly available. Most evaluations rely on fairly simple descriptive statistics (e.g. means, frequencies, differences, etc.), but where more complex analyses and causal modeling are derived, evaluators will need to use analyses of variance, regression analysis or structural equation modeling;
- **Conduct additional analyses based on the initial results.** The initial analyses will often raise as many questions as they answer. To address these questions, further analyses can be performed. Several iterations of re-analysis cycles may be required, as emerging patterns of data suggest other interesting avenues to explore;
- **Integrate and synthesise findings.** The final task is to integrate the separate analyses into an overall framework, drawing conclusions from the data to answer the evaluation questions. As the different data sources may not always yield consistent findings, apparent contradictions should be explained.

**Report evaluation findings**

The final step of the evaluation process is to report what has been found. This requires pulling together the data collected, distilling the findings in light of the evaluation questions, and disseminating the results. An evaluation report typically includes sections on the background, evaluation questions, evaluation design and methods, data analysis, findings, and conclusions. This information needs to be provided in a manner and style that is appropriate, appealing and compelling to the target audiences. Different reports may have to be provided for the different audiences, and it may be necessary to add other methods of communication findings, such as presentations or web-based documents, to complement the evaluation report.

**Practical issues**

**Staff skills**

Planning an evaluation, selecting an evaluation design, collecting data, analysis and interpretation requires specific knowledge and skills. When these are not available in the project organisation, evaluation can be outsourced to an external evaluator. Outsourcing has pros and cons: while it is likely to enhance the quality and objectivity of the evaluation, add to the project status, and take away the practical burden of carrying out the evaluation, it also reduces the ownership of the evaluation results, may give rise to conflicts over priorities and reduces the opportunity to learn from the project. Whether or not the evaluation should be done by experts depends on its scope. Small-scale evaluations focusing on formative aspects of a project can mostly be undertaken by organisations themselves. Large-scale, complex evaluation designs, on the other hand, require more expertise to design the study, select the instruments and manage the data collection and analysis.

**Budget**

Project evaluation can be costly, particularly if it aims to capture various aspects of both the process and outcomes of the project. Evaluation should therefore be incorporated in the project’s budget in a way that makes the evaluation study realistic, manageable, efficient and productive.
Timing
It is a common mistake to assume that evaluation takes place at the end of a project. Although the effects of a project are usually achieved at the end, evaluation must be planned from the outset and conducted throughout the project life time. The scope, complexity and quality of the evaluation design will affect the time needed for data collection and analysis. It is important to plan enough time for the evaluation, taking into consideration the requirements of the methods envisaged. A survey requires considerable time to create and pretest questions and to obtain high response rates. Qualitative methods may be time consuming because data collection and analysis overlap, and the analysis gives rise to new evaluation questions. If insufficient time is allowed for evaluation, it may be necessary to curtail the amount of data to be collected or to cut short the analytic process, thereby limiting the value of the findings. For evaluations that operate under severe time constraints – for example, where budgetary decisions depend on the findings – choosing the best method can present a serious dilemma.

Further reading


CHAPTER 10

10. Disseminating Project Results

What is dissemination?

Dissemination is the process of making the results and deliverables of a project available to the stakeholders and to the wider audience. Dissemination is essential for take-up, and take-up is crucial for the success of the project and for the sustainability of outputs in the long term.

Key elements of dissemination

Purpose

All dissemination should have a purpose and should support or inform project development in some way. The purpose of the activity may be to:

- **Raise awareness** – Let others know what you are doing;
- **Inform** – Educate the community;
- **Engage** – Get input/feedback from the community;
- **Promote** – ‘Sell’ your outputs and results;
- **Make sustainable** – Ensure that the effects will be sustained after the project.

Defining the purpose of dissemination is a first step to developing a dissemination and sustainability strategy.

Dissemination strategy

Each project must develop a dissemination strategy as part of the overall project plan. The dissemination strategy needs to explain how the visibility of the project outputs and outcomes will be maximised, and how the project outcomes will be shared with stakeholders, relevant institutions, organisations, and individuals. It should be planned in consultation with the project partners and explain:

- **What you plan to disseminate** – The message;
- **To whom** – The audience;
- **Why** – The purpose;
- **How** – The method;
- **When** – The timing.

Exit/sustainability strategy

In addition to a dissemination strategy, projects must also develop an exit/sustainability strategy outlining what should happen to the project outputs at the end of the project, and to explore how they can be sustained. Like the dissemination strategy, it will consider the processes necessary for embedding in and being taken-up by the community. However, where dissemination tends to focus on activities to inform, educate, and engage, sustainability tends to focus on models and scenarios.

Stakeholder analysis

The dissemination and sustainability strategy should be based on a **stakeholder analysis**. A stakeholder is anyone who has a vested interest in the project or will be affected by its outcomes. A stakeholder analysis is an exercise in which stakeholders are identified, listed and assessed in terms of their interest in the project and their importance for its success, dissemination and sustainability.

Language

Projects often develop deliverables that are technically difficult and complex. This is fine for internal discussions, but not for dissemination. Dissemination activities should use language that is non-technical and understandable for the target audience. Stakeholders need to know what has been achieved and why it is important. The same messages can be used for dissemination to different audiences, but the language should be adapted for each audience.

Dissemination methods

Publications

Publications presenting the project and describing its results are the most common method to disseminate project results. When they use a language that is appropriate for the target audience, publications can add to the visibility of the project.

Conferences and workshops

Conferences, workshops, or case studies based on the project can ensure that the project has a high profile, that the community learns from its achievements and that the outputs are embedded and taken up. They also offer the advantage that communication can go in both directions: members of the target community can be invited to contribute ideas and brainstorm about ways to make use of the project results. Thinking early in the project about the use of results will maximise the impact of dissemination and the sustainability of its outputs.

Collaborative events

Activities to disseminate results for clusters of related projects are not only more cost effective, but also often have more impact than those at project level. Practitioners are more likely to attend a meeting presenting the results of several projects than of one project. Activities to disseminate results for clusters of related projects are not only more cost effective, but also often have more impact than those at project level. Practitioners are more likely to attend a meeting presenting the results of several projects than of one project.

Website

Most projects create a web page or web site to explain the project aims and objectives and to disseminate information.
about project activities and results. As a dissemination vehicle, websites can include publicity the project has created, journal articles, publications and presentations at conferences. Some project websites also make their deliverables available, for instance through digitised images. It is important to think of what would interest and engage the people who will visit the site and attract visitors, e.g. reports, designs, models, evaluation criteria, guidelines, demos, questionnaires, etc. Other useful hints are to:

- Make the website attractive and easy to use, with intuitive navigation;
- Keep the website up to date;
- Submit the website to key search engines so it gets lots of traffic;
- Ask key websites on similar topics to link to yours;
- Use a link checker and make sure there are no broken links;
- Make sure it follows best practice in accessibility for disabled users.

**Sending e-mails**

Sending e-mails is a direct and easy method of communicating with any audience.

**Ensuring sustainability of project results**

**Steps to ensure sustainability**

To enhance the sustainability of a project, the following steps can be followed:

- A good starting point is to revisit the stated project outcomes, and consider the changes the project will stimulate or enable. The outcomes may relate to what people will be able to do better, faster, or more efficiently because of what the project has achieved;
- Next, one can consider the take-up and embedding that is needed to achieve the envisaged change. The project outputs may include tools, models, guidelines, methods, case studies, knowledge or recommendations that can be taken up by the community. What is necessary to encourage the take-up, use and adoption of these outputs? How can they be made available and accepted? – The previous steps lead to the formulation of an exit strategy, which outlines:
  - **Access** – Who will host the deliverables after the project ends? Will they be available on the project web site? Have other arrangements for hosting been made?
  - **Reservation** – Where will the deliverables be preserved?
  - **Maintenance** – What supporting documentation will be needed to maintain deliverables, e.g. specs, user manuals, technical manuals? Will any ongoing maintenance be needed and what will it cost?
- **Intellectual property (IP)** – What IP rights need to be cleared to make sure deliverables can be accessible to the teaching and learning community after the project ends?
- A next step is to think if there will be any project deliverables or outputs that will be sustainable in the long term. There may be outputs (e.g., tools, guidelines, protocols …) that could be used by other projects or that are useful for the research community. These outputs should be identified, as well as who will want them and why;
- The last step is to think through sustainability scenarios for the outputs that should live on after the project. Think about who might carry them forward, how and the issues that will need to be addressed to make these outputs self-sustaining.

**Further reading**
