

## MANUAL OF PROJECT MANAGEMENT

Non-governmental organizations are involved in more and more complex operations in the field of development work and in the promotion of campaigns and social action. Commitment, idealism, the ability to communicate with ordinary people are qualities which NGOs often bring to these tasks. But they also have to be able to perform their work efficiently, without unnecessary wastage and delays. Both donors and target groups demand no less. Project management techniques can help to improve performance in this respect.

Before we start to introduce you to the methods and instruments of project management, you will learn how to recognize a project and, secondly, see why projects need a special kind of management to get them done right.

### What is a project?

Lets pretend for a moment that you are the administrative assistant to the managing director. You might be responsible for coordinating the annual fund-raising drive, but you are still responsible for the day-to-day activities, such as scheduling appointments, screening mail, writing minutes of board meetings. The fund-raising drive is a project, because it only gets done once a year and it has a clear end result - the deposit of, hopefully, a large sum of donations in the fund-raising account. The ordinary calls, reports, and letters of your job just keep getting done, over and over, every day. There is no end to this process.

Most ordinary work is repetitive and process-oriented. Projects therefore are usually defined as specific end-results outside the routine job functions. Projects have a life of their own and projects usually operate outside the normal routine.

### Definition:

*A project is a sequence of tasks with a beginning and an end that are bounded by time, resources, and desired results.*

This means that a project has

- a **specific, desired outcome**;
- a deadline or **target date** when the project must be done;
- and a **budget** that limits the amount of people, supplies, and money that can be used to complete the project

There are at least six **characteristic features** that define every project and make it different from most ordinary work:

- A project has a **defined beginning and an end**. Getting from the beginning to the end of a project typically involves a definable sequence of steps or activities.

- Projects use **resources** (time, people, money) that have been specifically allocated to the work of the project.
- The end results of a project have **specific goals of quality and performance**.
- Projects follow a **planned, organized approach** to meet their objectives.
- A project usually involves a **team of people** to get it done.
- Every project is **unique**. This does not mean that certain activities have to be unique, but rather because of their different contexts and their particular use of resources, time, and results.

Non-governmental projects may be narrowed down even more:

- Projects are **functional** and **sociopolitical plans**, that are limited by time and space and are supposed to have an effect within this framework.
- In the third world aid policy, a project is defined as a timely limited process of bringing results.
- Projects are usually complex and are a **composure of many single measures that are related** to each other. Many are seen as an innovative experiment to solve problems as a model case.
- Projects in field of aid to developing countries usually need the **cooperation between different specialists from different fields**.
- Projects do have a project leader or project manager.
- Sponsorship is restricted to a rather short time period. In the field of aid to developing countries this time varies between months and years, in the NGO-work, it may be sponsored for a follow-up time of up to ten years.
- The area of project work is various. There are simple visiting projects, the promotion of single specialist home or abroad in the organization up to very complex sociopolitical projects that afford a very high funds.
- A broadened expression of project is programm. A program is defined a more than one project, that are connected regional or sectoral and do have a common concept.
- Programs and projects are the central elements of developing strategies to reach defined goals. Thus, they are the powerful instruments to organize resources for international aid agencies, ministries, and welfare organizations.

## Project Management



Now that you've learned what a project is and that it can be managed better with **techniques of project management**, you might wonder what project management actually is.

Even though every project is unique, all projects share similar features and balance among time, money, and results. Because they are somewhat alike, and because projects generally have to get done in addition to your ordinary work, you need some special tools to make it easier. Similar management techniques can be used to help bring projects to a successful end. This is what you are going to learn in the rest of the course.

### Definition:

**Project management is the process of combining systems, techniques, and people to complete a project within established goals of time, budget, and quality**

Project management is a **combination of steps and techniques** for keeping the budget and schedule in line, its tools help you to avoid frustration over missed deadlines, unclear expectations, and budget overruns.

You will be able to **define clear responsibilities** and **deadlines** for activities, you can provide a structure within and across organizational boundaries, and you can **allocate specific resources** to objectives. This all will help you, and anyone else in your team to meet the project goals better and with less frustration.

If you're already convinced that project management is the right tool for your organization and your work, you might skip the next paragraphs and move right on to [Phase One](#) in project management. If you are still skeptic, keep on reading.

## Project Language

Before we go into projects and project management any deeper, you have to know that there are many **different expressions** for the same thing in project management. You should always be aware of this.

Depending on the book and the field of work, "**project management**" for example sometimes is also called "**program management**", "construction management" or "project monitoring".

## Project Management Phases

According to various sources, there are **five phases** or functions to the project management process:

☐ [Initiation](#), ☐ [planning](#), ☐ [execution](#), ☐ [controlling](#), and ☐ [closing](#).

Some project management experts differentiate into phases of conceptualization, feasibility, preliminary planning, detail planning, execution, testing, and termination; others break project phases into conceptualization, planning, deciding, execution, and controlling. However, it all turns out as a cycle of project management phases or -functions, that could be visualized as follows:

Along with this scheme this course will explain the different phases of project management in the following, while the planning phase will take the largest part.



### Phase 1: Initiation

At the beginning of a development project there is an "idea of a project". During a communication process between the different person involved the idea is transformed, clarified, condensed. This phase is called **initiation** or **identification**. In the German literature it is also called **definition phase**.

Here the baselines for the initiation of the project are drawn. Projects can be **initiated** by private persons (visits, school partnerships), institutional contacts (church-church), intergovernmental negotiations, etc.

The people **involved** can be the beneficiaries, project people and others concerned with the

problem. They elaborate a first draft of a project plan and discuss it. Donor organizations are not yet involved

In the field of development cooperation the "Antragsprinzip", the "principle of application", is the dominant principle. Therefore **the first draft of a project concept must be transformed into a demand format of the donor organizations involved.** Different donor organization have different formats. So already the application is forcing you to give a framework to your project.

Misereor for example demands to provide the following points in the project application; they also should be included in project planning:

- Project title,
- applicant,
- legal holder of the project,
- project management,
- location and situation,
- development problems on the ground,
- project goals,
- project measures,
- personnel and consultancy inputs,
- project costs,
- financing plan,
- target group participation,
- integration in the wider development context,
- continuity of the project,
- monitoring and evaluation.

## Situation Analysis

Every project starts with an analysis of the given situation. Therefore a couple of questions might help:

- Who are those concerned?
- Who is the initiator of the project?
- Who is the financing organization?
- Are any other people or organizations involved in the project?
- Who are they?
- Can the project area be characterized?
- Are there any similarities to prior projects?

## Project Goals

It is important to specify the project's goals. A "fuzzy" defined or unfocussed goal can be unclear and interpreted differently by different people. In this situation, you might not be able to tell whether you successfully finished the project or not. A goal will help following the plan throughout the project, it also may help making decisions and eventually convince others when settlements have to be made.

When defining a project's goals, it is important to not only keep the final result in mind, but also the goals "on the way". Especially in the work of non-governmental organizations in the field of development work the project goal is not the same as the general, comprehensive development goal.

The following aspects should be considered:

The **goals must be precise**; They should be clearly defined and reasonable.

The **goals must be realistic**; It must be possible to realize the goals within your project. It is not helpful if your defined goal is to "stop starvation".

The **goals must be measurable**; It must be possible to measure the success at meeting the goals. This type of goal is also called deliverable, a clearly defined result, goods or services produced during the project or at its outcome. Deliverables have to be measured in **quantity**, but also in **quality**.

The **goals must have a time component**; Projects must have a definite finish date. If projects are not limited in time, chances are that they may not get finished.

Independent of the project's individual goals, the following **prerequisites** have to be fulfilled:

1. **Completing the project on time**
2. **Completing the project within a specified budget and with the available resources**
3. **Completing the project by achieving the desired quality**

## The Project Team

Projects succeed or fail with the project team. Every person involved with the person influences the realization of the project goal. Therefore it is important to carefully choose a project crew.

### Who are members of the project team?

The **core** project team usually consists of the people most involved with the project. The core project team will be associated with the project from the start to the end. On small projects, this might be only one person (you!), on larger projects there might also be managers, coordinators, supervisory personnel. Key persons, such as scientists, engineers, advisors or other experts may also play important roles in a larger project.

In **addition** to the core team, there might be **outside consultants and specialists**. These people are usually required for specialized portions of the project, however, once their part is completed, they are no longer part of the team. Even though administration and support staff

may play a role in the project, they are usually not considered core team members due to the fact that they are not usually considered an essential component.

### **Where are the project members coming from?**

There are usually two ways to find your project team: You can take **people from within your organization** or **hire outside staff**.

Hiring outside staff can add additional expense to the project. However, an organization that requires a project to be completed must make staff available, even if it means pulling people off other projects or bringing in outside help.


It is common to use people for projects on what is referred to as **segmented time**. "Segmented time" means that they may work on other projects or have other duties within the organization while they are members of your team, part-time.

## **Phase 2: Project Planning**

In this chapter of the course you will learn to plan a project. This means you already have a project with defined goals, probably given resources and a budget.

### **Structuring the project**

Before it can be planned and implemented, a project must be analyzed and split into manageable tasks that can be assigned, scheduled, tracked and organized.



 **Task lists** are documents that organize and summarize the tasks necessary to complete the project. It might be a simple sequential list of tasks, that later gets organized in a hierarchical way.

[First thing your want to do is make a list of all tasks in your project.](#)

You will have to do this exercise in order to download material important for the rest of the course.

### **Work Breakdowns Structure (WBS)**

A standard way of organizing task for a project is called the **Work Breakdowns Structure**.



The WBS is a **hierarchical chart** used to organize the tasks of a project into related areas. It is usually completed as a tree diagram or as an outline. Therefore, the project will first be divided into smaller units ( **subprojects**). Each of these subprojects will then be further divided into smaller work packages,  **"tasks"**, also called "activities" or "events". Tasks are the smallest unit in a work breakdown structure.

Breaking the work into tasks can be beneficial for several reasons:

- A work breakdown **reduces complexity**. The job of performing and managing one large task is replaced by a number of smaller tasks. Even though there are many more small tasks to be done, each can more traceable so the total effort is less.

- It allows **short-interval scheduling**. Putting the work into the most logical sequence for completion helps to determine the best schedule for the project. Work can be broken into pieces of a short duration and each of these can be assigned a definite due date.
- It helps to **determine** the **skills that are needed** to complete the work on a project. The number of people and other resources can be defined more easily.
- It allows the Project Manager to **communicate** the work that needs to be done **to other team members** without getting into too much detail. A task list can also be used to negotiate necessary changes to the work sequences during the project.
- It allows **close monitoring** of project progress, prevents problems from building up undetected, and provides increased ability to recover from mistakes and to respond to change.
- Breaking the work into tasks ensures that all the work sequences are **identified** and **understood**.

## Guidelines for Breakdowns

A project can be broken down into  [subprojects](#) and  [tasks](#) in several ways. There may be no such thing as the best breakdown, however, some breakdowns are more useful than others.

An important aspect for the **selection of structure and classification** of a breakdown is the existing organizational structure of the companies and organizations involved in the project.

## Levels and Layers

The idea behind the WBS is to break larger tasks and subprojects into their individual components. **There can be as many task levels, depending on the complexity of the project.** In a complex project, such as implementing a new health system to a country, the first level in the master work breakdown may actually be list of smaller projects that are themselves projects within projects. Some projects may need as few as three layers in the WBS. Others may require ten or more layers, or require a WBS for each subproject within the WBS.

Breakdown levels can be divided in five separate Levels:

- **First Level:** The total project
- **Second Level:** Subprojects or milestones
- **Third Level:** Major Tasks
- **Fourth Level:** Subtasks
- **Fifth Level:** Minor tasks or work elements



## Dividing the WBS

There is no magic formula for organizing a WBS. However, a WBS could be organized in any of the following ways:

- **Object orientation** focuses on the project object, the object will be subdivided into pieces.
- **Functional orientation**, the object loses its contours, the tasks are becoming the main focus in this structure
- An **organizational structure** is useful in a clearly divided organization or cooperating set of separate organizations.
- By **physical location** the WBS focuses on geographical locations

## Coding Systems

A code is a shorthand method for conveying essential data about an item. For project management purposes an item might be anything from the whole project to a small part of it.

There are many reasons for allocating codes to items, rather than simply describing them in words. **Codes are designed to be precise and unambiguous.** They also have the advantage, essential in computer systems, of facilitating filing, analysis, editing and sorting for reporting and control. The **functions of a code** include the first or both of the following:

1. A code must act as a unique name that identifies the item to which it refers.
2. The identifying code, either by itself or by the addition of sub-codes, can be arranged so that it categorizes, qualifies, or in some other way describes the item to which it relates

## Plans and Schedules

After breaking down the project into smaller work packages, it might be easier to define what has to be done, but still don't know when, in what sequence, or who will be doing them. Therefore the use of plans, such as bar charts and network diagrams can benefit planning and scheduling.

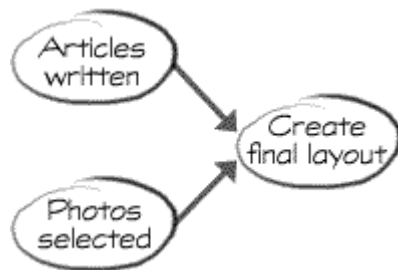
In the following chapters, you will be introduced to the [Gantt Bar Chart](#) and to [Network Diagrams](#).

## Network Diagram

A network diagram provides a more powerful method to **show all the logical interdependencies** between different tasks. It shows the path of the project, starting and completion dates, and names the responsible person or party for each task.

The network diagram also allows you to **quantify priorities**: those tasks that cannot be delayed without endangering project completion on time are identified as critical, and all other tasks can be ranked according to their level of criticality.

## Defintion:



A network diagram is the **logical representation of tasks** that defines the **sequence of work in a project**. A network for a simple project might consist of one or two pages, on a large project, several network diagrams might exist: one for the overall project and one for each subproject that leads to the completion of the project.

There are many different methods and techniques to create a network diagram. In this course you will learn a diagramming technique called **precedence diagramming**. This method is a rather simple but nonetheless a very effective method.

**Precedence relationships** in a network diagram requires that **one task is completed before the next task can be started**, the first one has precedence over the second. For example, if your project is to create a newsletter, the articles have to be written before they can be reviewed. In a network diagram, this precedence is illustrated by drawing one task after another.

If you want to illustrate your article with some pictures, the article has to be written and the photos have to be selected before you create the final layout.

Both of the precedence tasks can be done simultaneous as long as suitable resources are available. In a network diagram it is possible to **identify concurrent activities** by drawing them parallel to each other in the same plane.

## Five steps to create a network diagram

Usually network diagrams start with a box labeled "Project Start" and end with a box labeled "Project End", all you have to do now is fill in the tasks in between.

### Step One: List all Tasks

You can use the task list or the [WBS](#) for that. For a network diagram, each task should have a unique identifying number or other code. A network diagram will lay out the work units or individual task level in your WBS. Higher WBS levels will be identified as milestones.

### Step Two: Establish the interrelationships between the tasks

To **determine the sequences and precedences** that need to be diagrammed for the tasks, ask the following questions about each task:

- **What task must precede this task?** Or: What other task must be completed before this one can be started?
- **What task follows this one?** Or: What task can not start until this task is complete?

- **What tasks can take place concurrently with this one?** Or: What tasks can be worked on at the same time this one is being completed?

The precedences and dependencies should be **noted in a list**. Some of the precedences won't become apparent until you actually draw the tasks and link them together, however, the list will help you to get the order right.

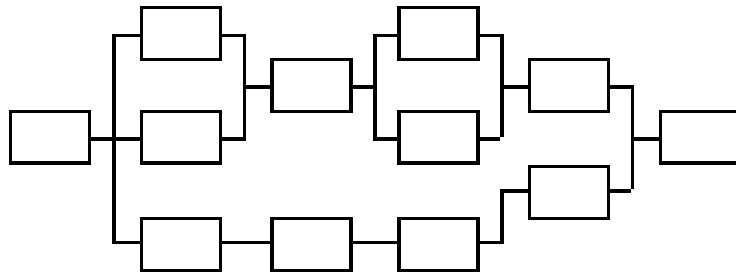
### Step Three: Identify Milestones

**Milestones summarize a sequence of tasks** or specify a key accomplishment during the project.

**Milestones are not tasks.** Milestones do not take effort and thus no resources or time. They are just convenient **markers for summarizing work** that has been performed to that point on the network diagram. The top levels of the WBS are a good source for milestones for the project.

### Step Four: Layout the Tasks and Milestones as a Network

Whether you want to start from the end and work towards the start of the project or the other way around is a matter of preference - the outcome is the same.



The above picture shows an example of a network diagram. Some tasks have one, others have two precedences; Many tasks can be done simultaneously.

### Step Five: Review your network diagram

It is a good idea to **review the logic** of your network diagram after you finished it.

Take a look at each task and connection and ask yourself the following questions:

- Are the tasks properly sequenced?
- Are all the precedences identified?
- Are there some precedences that aren't really required? Or, are there tasks that can be completed parallel that are incorrectly shown as sequences?
- Are all of the tasks necessary?
- Are all tasks listed in the diagram?

## Fine-tuning

Now you have created the outline of the network diagram. But to complete it, you need to fill in time and dates, and find the critical path.

### Estimate Task Duration

Estimate the task duration based on the resources you have at hand or can afford. The duration of a task is the time that it takes to complete a task. Now you need to estimate the duration of a task over a number of days. Before you make your best guess, you might want to ask people who will actually do the work, get an objective expert's opinion, or you might try to find a similar task in a project already completed to see how long it took to get it done.

Note the duration time (usually in workdays or workweeks, but hours, months or years are also possible) for each of your tasks in the network diagram.

The **layout** of task- and milestone-boxes and arrows with their descriptions can differ. There could be just one field with the name of the task or each box is divided into many fields.

A good example for a task box could look like this:

earliest start	estimated duration	earliest finish
activity number activity description		
latest start	float	latest finish

### Calculating

Now calculate the Network: **take the earliest starting date** (could be a given date or just a number for a day), write it in the field for "earliest start". Then **add the estimated duration** and enter the result in the field for earliest finish.

Go to the next activities, following your network diagram and enter the **earliest finish date** of the first activity into each of the following activities' **earliest start fields**. Continue this until you get to the end of your network diagram.

Now you have to calculate backwards: To calculate the **latest possible finish date**, you work backwards from the last day of the project and subtract the estimated duration from the latest finish date to get the **latest starting date**.

Comparing the results of both calculations, you will find out the time available for the task to complete, the **float**, also known as slack or slack time.

To calculate the float, you take the latest finish date, subtract the earliest start and the duration. If the float for a task equals zero, then that task is on the critical path. The amount of float is the amount of flexibility for starting a task, that means, all tasks on the critical path should get higher attention in order to reach the project finish date on time.

$$\text{Latest finish} - \text{earliest start} - \text{duration} = \text{total float}$$

**You might change the duration time** and see how the float of each task and the critical path change. **Click on the re-calculate button** to have the dates changed.

## Gant Bar Chart

**A bar chart, sometimes also called project timeline, shows all tasks in relation with time.** With some limitations, the interdependent relationship between tasks can also be implemented.

Bar charts are used frequently and is the preferred method on many projects, because they are easy to set up, read and understand. The charts are often assembled on wall-mounted boards, using proprietary kits using strips of material which can be moved about to adjust the schedule as required. Nowadays more and more computer programs are used to generate and update the bar chart.

Bar charts are drawn or constructed on a **scale** where the **horizontal axis is directly proportional to time**. It could be calendar weeks, months or years for more complex projects, days or hours for very short projects.

**Each horizontal bar represents a task, its length scaled according to its expected duration.** The name or description of each job is written on the same row, at the left hand side of the chart. To indicate the constraints between tasks, vertical lines can be added to the chart. They indicate that one task has to be finished before the following one can possibly begin.

task	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9
task 1	█	█	█						
task 2				█	█	█	█		
task 3			█	█	█				
task 4		█					█	█	█
task 5	█	█	█	█	█	█	█	█	█

Example for a Gantt Bar Chart.

Although it is possible to schedule more than a hundred tasks on an adjustable bar chart, rescheduling is a different story. Setting up a complex plan in the first place might take a few

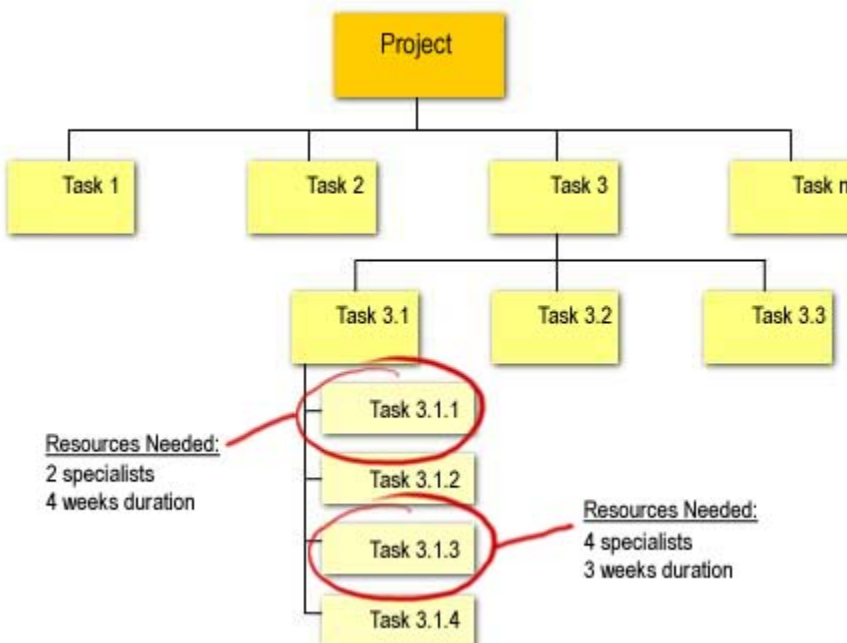
working days or a week, adjusting it subsequently to keep in step with changes might prove impossible.

**Bar charts are suitable only for relatively small projects** because the links might become too difficult to draw and follow when there are too many tasks.

## Resource Planning

After the tasks have been defined and a basic network established, a complete list of resources required for your project can be developed. You are in the position to say what and who you need, and when. The goal of resource planning is to schedule all necessary resources on time.

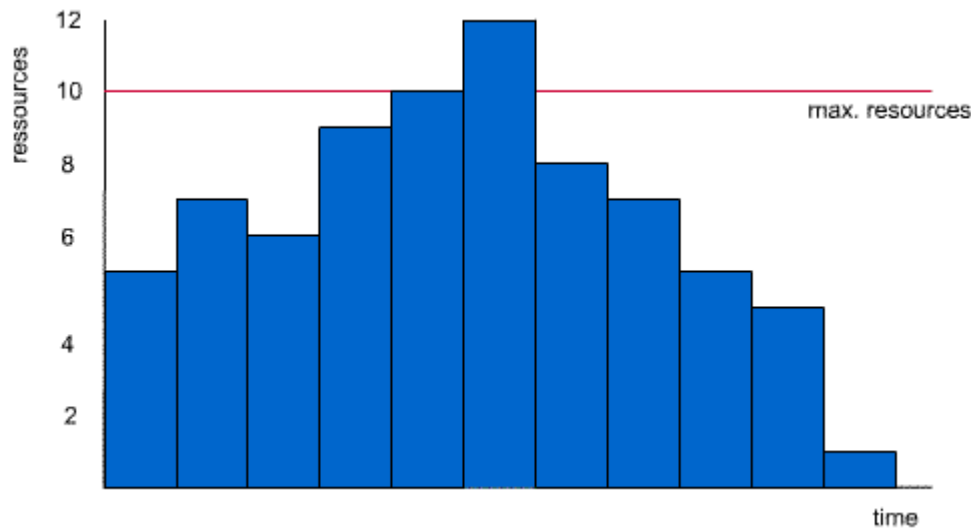
In a first step, **determine the need of resources for each task**. Every task has a certain need for resources, people, money, equipment, information, technology etc. To keep it simple we are looking at people per weeks. The picture below shows an example.



In a following step, **write all the needs in a table**, similar to a [Gantt Chart](#). If task 3 starts in week 4 and lasts 3 weeks, **list all people you need per week in the chart**.

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
task 1		2	2	2	2																		
task 2				3	3	3	3																
task 3																4	4	4	4				
task 4	1	1																					
task 5								4	4	4	4	4	4	4									
task 6							2	2	2	2													
task 7													1	1	1	1	1						
task 8																							
task 9			1	1	1	1	1																
task 10					3	3	3	3	3	3	3	3											
task 11															2	2	2	2	2	2	2	2	2
task 12										2	2	2											
sum	1	3	3	6	9	7	9	9	9	11	9	9	5	5	3	7	7	6	6	2	2	2	2

By **summing up the people you need** for a certain time (e.g., a week) you can find out how many resources you need per week and whether or not you need more resources than you have.



If your plan shows an **over-allocation** you have to consider whether you want to hire external resources or if you can re-design your plan to fit. You can **use the floats you calculated in the network diagram** to move a task to a time when less resources are used and therefor

If the allocation is **very high**, it won't work just to re-allocate the resources. You basically have three choices:

1. Have the project members spend additional time on the project,

2. move the project end-time to a later date or
3. hire extra project staff members

## Cost Planning

Budgeting is one of the most important aspects of planning and directing a project. An accurate estimate of project costs is an essential part of the proper basis for management decisions and control.

In the following chapters you will learn about

- 📖 [cost estimation](#),
- 📖 [taming up the budget](#) and
- 📖 [preparing charts for an approval presentation](#)

## Cost Estimation

Costs you have to think about in any project are 📖 [fixed cost](#) and 📖 [variable cost](#).

It is clear that the better the project can be defined at the outset, the less the chance there should be of making estimating errors. However, the possibility of error can never be eliminated, and no sensible person could ever declare project cost estimates to be assured. **Estimating always involves an element of personal judgement**, therefore projects will often produce unwelcome surprises.

If the final project costs do coincide with the estimates, that might be a cause for celebration for a project well managed, however, sometimes it could be pure chance.

The process of building a budget has to be an orderly one, in order for it to succeed.

One must **carefully understand the components of each task** and **then cost out each one**.

If you don't know what is involved in a task - ask someone who might know. Try to get all the budget input you need from

- **Your staff:** You will need firm estimates for the time required for task completion as well as all suppliers and equipment. These estimates must be specific.
- **Outside service vendors and suppliers:** You must have hard numbers from outside providers and consultants. Demand a written estimate that fixes the cost.
- **Other managers or experts:** Those in your organization that have handled projects can provide excellent advice and study cost estimates for problems.

Here are a few tips to think about when estimating the project's costs:

- Take your time and ask as many people as needed. Estimates should not be made in a hurry, as they tend to be highly inaccurate.



- Document your work. It is easier to re-enact and eventually alter your calculations if you write down how you estimated.
- Estimates should be budgeted slightly higher than originally calculated. It is better to be pessimistic than overly optimistic. If you run out of money, because your estimation has been too optimistic, you are endangering the whole project.
- When your projects involves transactions in currencies other than your own national currency, a higher uncertainty and risk is given when exchange rates vary. If you don't have the option to include safeguards or obtain all quotations in your home currency, it usually is a matter of skill, judgement and foresight to keep the risks to a minimum.  
It has become common practice in project cost estimation to nominate one currency as the control currency for the project, and then to convert all estimated costs into that currency using carefully chosen exchange rates.
- Depending on the level of risk in the project, many project managers add a certain percentage to the budget for unforeseeable expenses.

## Taming the Budget

The step after collecting all budget numbers is to **fine-tune** the figures. **This might happen several times during the planning process**, new estimates might arrive or tasks might be added to the project that were forgotten or ignored in the initial estimating process.

Initially, **a rough first cut** of the budget will be required. Original numbers may have been pulled out of a hat or someone might have guessed that "the bridge costs \$10.000". **Rough cuts should not become the actual budget number**, it could put a project over the budget.

In a second cut, **estimate each task suspiciously**. You might have to ask outside providers or other experts, or you might have to break down a task even more to make a better estimate. Firm written estimates from suppliers or experts is better than guessing.

In a third pass of your budget you are doing the **actual fine tuning**. You are turning guesstimates into something close to reality and provide an overall estimate on the project's real scope. You might reveal that your initial \$3000 guess for a task is more realistic at \$12.000.

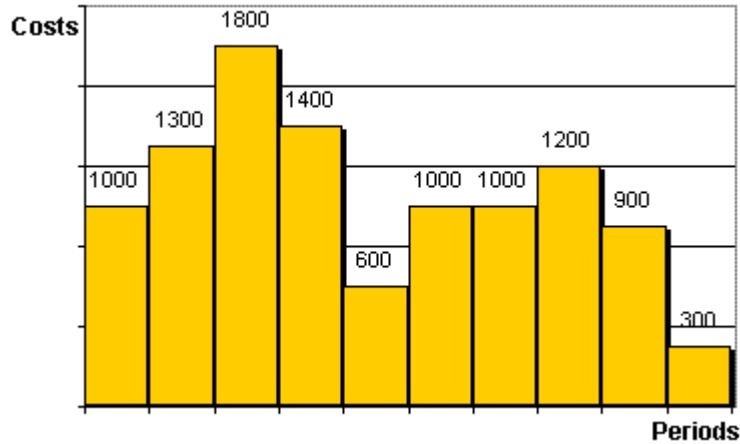
After having re-re-reviewed the budget and the budget appears to be workable, it gets **wrapped into the project plan**. The budget usually has to be approved. [Present your budget](#) to the responsible person if it has been done properly and, with some luck, it will be approved the first time, often you might have to revise it and present it again.

## Visualization

Not only for presentation, but also for the tracking of money flows during the project, it is very helpful to visualize the project costs.

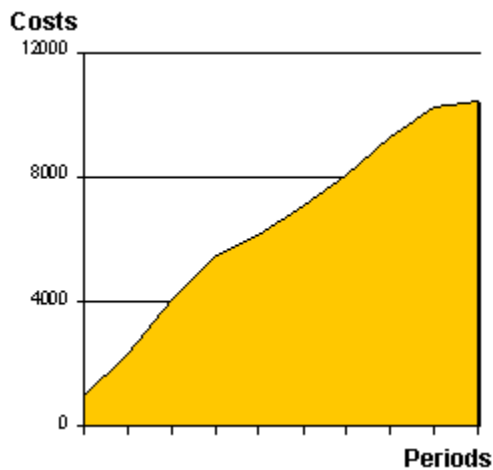
There are two often used and helpful ways to visualize cost curves. One is a graph that shows the amount of money needed at a specific period of the project. **With this chart you have the**

chance to see exactly how much money is needed at what time. List all costs of all tasks according to their planned date and sum up the costs for each period (e.g. weeks or months).



Graph showing the amount of money needed at a specific period of the project

The other way of visualization shows the cumulated costs of your project. You will have an **overview of how much money is needed at or up to a certain point in time**. Add up all the costs at each time and note it in a separate chart.



## Plan Approval

Before the project can start, the project has to be approved by your organization and maybe by a sponsoring agency. Sometimes, multiple departments will be involved, sometimes you'll get to sign the approval sheet on your own. In any case, the most important aspect of the approval is getting the budget freed up so your can start the work.

Take all the plans you have worked out so far, the work breakdown structure (WBS), the network diagram, the schedule, the team and the budget, and review it as a whole. Does it all

make sense? Are the figures and dates realistic? Is everything complete? Are you prepared to justify each of your decisions?

An efficient way to present a plan is with a summary presentation backed up by hard copies of the plan's WBS, worksheets, and network diagram. Presenting a management overview hopefully will avoid a line item review of each task, its schedule, and budget. But if it comes to that, the back-up data provided in the printout should do help.

### **Phase 3: Execution**

After the initiation and the planning phase and once your project has received authorization, it is time to get the project started. The beginning of the project might be delicate, because how you begin the executing phase of the project will establish your likelihood for success - or failure.

A common risk is failure to start on time. Very long delays can be caused by misrepresentation, legal or planning difficulties, shortage of information, lack of funds or other resources, and a host of other reasons. How will everybody know what to do? And when? What will be the first step? Who's on first?

#### **Project Kickoff**

Most of these questions will be answered in the project **kickoff event** and the first project meetings with the team and individuals.

Depending on the size of the project and your organization, during the **very first meeting, the team should meet and the organization will be explained to everybody**. In a small project a small meeting and a memo to the team participants including the key dates might do, a larger project might ask for a formal project kickoff event.

The type of event will depend on the size, importance, organization, and budget for the project. You might consider a multimedia presentation of the project in an auditorium with buffet lunch or snacks served afterwards, a pizza and beer party at a local bar or a sit-down dinner with motivational speakers, formal introductions of key project personnel, or something totally different.

Use your judgement, take a look at previous similar projects in your organization to see what types of events have worked and what did not.

#### **Project Meetings**

The first project meeting with all working members of the project team should begin about **three days to a week after the project kickoff event**. At this point the actual project work begins. In the project meetings it is helpful to:

- Introduce the members of the team **to their roles in the project**;
- Clarify the **project goals**, operating procedures, and responsibilities;

- Review the **first priorities** for the project and repeat briefly the other objectives and overall schedule;
- Review **individual plans** for getting work started;
- Discuss **methods and tools** to be used to manage, control and operate the project;
- Deal with **objections** to the current project plan and work them out if possible.

## Project Leadership

You might use every project management technique and method, but without assuming leadership of the project, it is unlikely you will get anywhere. Only if you become the **leader** and **manager** of the project, you may succeed.

As a **leader** you will command authority and take responsibility for guiding the project. You will also be a trusted and reliable source of information on the project. As a leader, you will be expected to be honest, competent, and inspirational. Your job is to motivate the team and to make sure everybody is moving in the same direction - towards the project goals and its finish.

As a **manager** you will monitor and control the project through to completion. You will review the plan, complete reports, balance the budget, update the plans, fix up the schedule, update the plans again, report on the updates, to complete the project on time and within the budget. You will also do a lot of other administrative tasks that were not thought of prior to the beginning of the project and might drive you crazy. However, managing the work does not mean that you are required to do all the work, therefore the magic word for successful managers is "delegate"! A successful project manager will delegate administrative tasks to an administrative assistant.

It is important that you do not forget the leadership role over the manager role and vice versa. **Don't get caught up in the management process and forget about the leadership part.** You will have to find a way to balance both jobs to succeed.

## Project Documentation

Many people will want information, information about the progress of the project, about the budget, about problems and achievements. The project team, clients, the financing organization, and managers deserve informed communication about the project on a timely basis.

Some information might be bypassed by a informal discussion with the team or managers, others require a written report. In addition to the regular status report, which contains information on current progress, schedule changes, and the budgets, other reports might be required to inform and motivate team members. In large projects, there might be cost-variance reports, load-leveling reports, supply inventories, and other formal documentation to track specific aspects of the project.

Documenting all processes in a daily diary or "logbook" can help to assemble these reports.

If possible, it is best to **do the paperwork immediately**. The longer you wait, the harder it may become to remember what happened. Putting it off "for a few days" may find you at the end of a project without enough data or notes to write a report.

A complete diary will also help in **controlling the project** and **writing the final project report**.

Read about an example on the next page.

**Example:** When working with the [HTN](#), **project progress reports** are generally compiled **every six month**. The HTN Head office prepares a commentary on the project progress report and forwards the report to the client / financing organization. The German embassy and the HTN project administration service office in the partner country each receive a copy of the project progress report along with the commentary. The HTN uses a standardized reporting procedure, tables and overviews are used wherever possible. The content of a project progress report is uniform:

1. Commission- and problem oriented summary of the project progress report.
2. Inputs provided in the period covered by the report.
3. Presentation and assessment of results achieved in the period covered by the report, including any deviations from planning targets.
4. Realization of the project purpose.
5. Updating of planning targets for the period to be covered by the next report.

## Phase 4: Monitoring and Evaluation

Once the project is underway, it takes a life of its own. Your key responsibility now is to keep things going on time and within the budget. After meticulously planning the project, you might assume that team members will simply stick to the plan and get everything done as specified. Unfortunately, this rarely happens. There are many possible reasons for this :



### Definition:

Monitoring is the systematic observation and documentation of the input of resources, achievements of results and impacts. It creates the prerequisites for steering project implementation on the basis of the planning targets.

Use the project plan you worked out as a primary guide for coordinating the project. **Monitor** the progress against the plan on a regular basis. **Compare** time, cost, and performance of the project to the budget, schedule, and tasks defined in the approved project plan. **Communicate** with all team members.

Update the plan regularly as changes occur. It should always reflect the current status of the project and any changes that become necessary because of new information, budget changes or other modifications.

### Definition:

Evaluation means **objectives-oriented assessment** of the information collected in the course of monitoring. This assessment of the expediency of the chosen approach and the attainability of the desired results and impacts forms the basis for the decision on project steering to be taken by the project management.

The earlier you realize a change in the project from its original plan, the better you might react and find effective corrective measures.

## Controlling

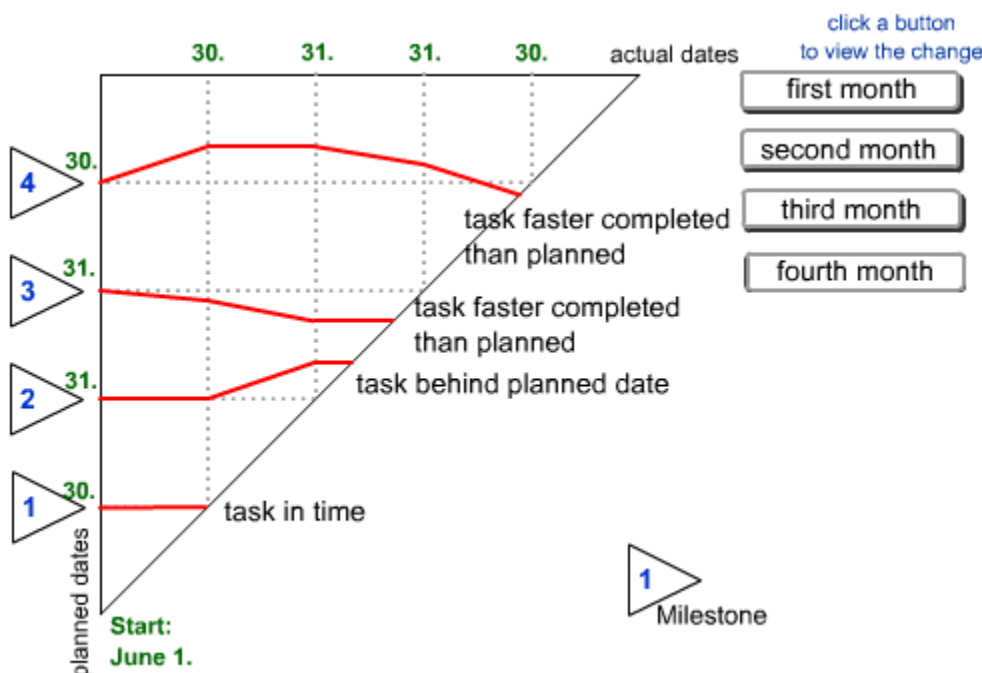
### Progress Control

The tasks and milestones you documented in the project plan form the checkpoints for progress control. **Status reports** are a fundamental monitoring tool to identify progress and problems.

Encourage your team members to take status reports seriously. Status updates, whether formal or informal, should be completed by each team member and then compiled and summarized by the project manager.

The subjective reports you might get from your team members make it a little harder for you to judge and value the statements. "We're almost done" might mean "We'll be done tomorrow" or "We're having problems with one part, nobody knows when it will be delivered, but once it will be here, we'll be done".

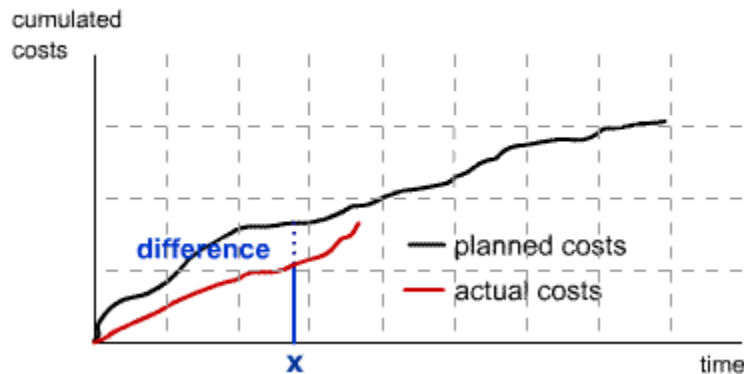
A good way to **monitor status** is to use two columns in a table and compare the current schedule with the original plan. When **visualizing it in a chart** you might get an even more powerful tool to envision the progress of the project.



### Cost Control

To review the project cost it is often useful to **compare the actual cost to date with the budget plan**. You might use the [cumulated budget plan](#) for the planned costs and compare it to the actual costs to date.

## Cost Control



Always consider the project's progress when you do an evaluation. The actual costs might be a lot less than the planned ones, while at the same time the project's progress might be weeks behind its planned status.

## Quality Control

Quality is one important aspect of your project as it has been specified in the project goals [link to project goals]. If your project is to build a stone bridge, the project is a failure when it can only be built on time if wood were used.

It is not always that easy to tell the quality status. On a technical project, you may need to bring in outside experts to check the quality, timeliness and budget management is in place.

## Changes

Quality is one important aspect of your project as it has been specified in the project goals. If your project is to build a stone bridge, the project is a failure when it can only be built on time if wood were used. **It is not always that easy to tell the quality status.** On a technical project, you may need to bring in outside experts to check the quality, timeliness and budget management is in place.

On rare occasion, late running might be acceptable and require no action. Usually, however, some degree of action is needed. You have to assess the situation, decide the appropriate action and implement it.

No matter of the size of the plan deviation, the budget, and the [float](#) of the task, there are two ways to handle the rainy day in the example above: Let it happen or look for corrective measures.

## Corrective Measures

Working overtime, maybe over one or two weekends, can sometimes recover time. Used occasionally, overtime can be an effective help in overcoming delays. It raises the project costs as you will have to pay for resources (staff and machines) for the extra day. When using the "working overtime solution" too frequently, the staff will be tired and work may be of less quality.



If the problems are being caused by a shortage of resources, perhaps these could be made available from external sources by subcontracting.

## **Phase 5: Closing**

Whether good or bad, there will be a time when your project must come to an end. To move on to the next project, or go back to your usual work with a sense of satisfaction, or at least without regret, your project has to undergo the closing phase.

Closure is important because it is the point at which you and the project team can say to yourself "**It's over**". Team members need to be acknowledged for goals that were achieved and to feel that the work is complete. The project manager, as well as the team members, can learn for future projects and "normal" work from techniques, processes, and procedures used in the project and therefore should be analyzed and evaluated in this phase. In addition to that, the following tasks are part of the closing process:

- [Finalizing and transferring responsibilities](#)
- [Reassigning people and releasing resources](#)
- [Meeting with clients and financing organizations](#)
- [Meeting with team member](#)
- [Handing over the keys](#)
- [and finally documenting the results](#)

### **Reassigning people and releasing resources**

Reassign people in the project and redirect efforts to other priorities or projects. People may be returned to their functional areas or assigned to new projects, or both. Inform managers of "borrowed" employees, temporary agencies, and contractors that the project's termination date is near. This provides the managers time to find other opportunities for their people or move them back into their usual job responsibilities. Release resources such as equipment and materials, so they can be disposed of or used for other work. Come construction and manufacturing projects also require clean-up tasks to prepare facilities for new projects.

### **Meeting with clients and financing organizations**

Meet with project initiators, customers and stakeholders to get their final approval of the project. They are the reason for the project existing in the first place, their approval signs the project's completion.

### **Meeting with team members**

Hold individual meetings with team members and team managers who reported to you. Thank them for their contribution and make notes on what they thought of the project, your leadership and what they would do in the future. Hold a final project meeting with all team members. Discuss the project with the team, decide on follow-up issues and last organizational tasks. In the end, celebrate the project's completion!

A transfer of responsibilities takes place if new staff must be brought in to man the completed project if appropriate. (The people who built the health care center probably are not be the same who will be seeing the patients.) Prepare a final report for the new team.

### **Documenting the results**

The project's results have to be documented and recommendations for the future should be made. The final report is both, a history of the project and a **final evaluation** of performance. It includes at least:

- an **overview** of the project including revisions to the original project plans
- a **summary** of major accomplishments
- an **analysis** of achievements compared to original goals for the project
- a final **financial accounting** and explanation of variances from the budget
- a list of **issues and tasks** that require further investigation
- **special acknowledgements** to team members and a team performance evaluation
- **recommendations** for future projects of this type

**Float**

Time available for the task to complete. To calculate the float, you take the latest finish date, subtract the earliest start and the duration. If the float for a task equals zero, then that task is on the critical path. The amount of float is the amount of flexibility for starting a task, that means, all tasks on the critical path should get higher attention in order to reach the project finish date on time.

**Project**

A project is a sequence of tasks with a beginning and an end that are bounded by time, resources, and desired results.

This means that a project has a specific, desired outcome; a deadline or target date when the project must be done; and a budget that limits the amount of people, supplies, and money that can be used to complete the project.

**Project Management**

Project management is the process of combining systems, techniques, and people to complete a project within established goals of time, budget, and quality.

**Milestones**

Milestones summarize a sequence of tasks or specify a key accomplishment during the project.

Milestones are not tasks. Milestones do not take effort and thus no resources or time. They are just convenient markers for summarizing work that has been performed to that point on the network diagram.

The top levels of the WBS are a good source for milestones for the project.

**Monitoring**

Monitoring is the systematic observation and documentation of the input of resources, achievements of results and impacts. It creates the prerequisites for steering project implementation on the basis of the planning targets.

**Evaluation**

Evaluation means objectives-oriented assessment of the information collected in the course of monitoring. This assessment of the expediency of the chosen approach and the attainability of the desired results and impacts forms the basis for the decision on project steering to be taken by the project management.

**Subproject**

A subproject is a portion of the whole project that can be viewed as a project in its own right.

**Task**

A task is a cohesive unit of work in a project - one that is not too big or too small to be tracked.

**Task List**

A task list is a document that organizes and summarizes the tasks necessary to complete the project. It might be a simple sequential list of tasks, that later gets organized in a hierarchical way.

This manual comprises the management of projects as a method of intervention in development processes with emphasis on the development of knowledge, skills and techniques with regard to: the project environment; project formulation; project information and the project manager; project organisations; project implementation planning; time, cost and risk management; the use and contracting of professional services; project management systems; community participation in project management.