

Addis Ababa University
Addis Ababa Institute of Technology

Software Project Management – 2023

Course Title : **Software Project Management**

Course Code:

Credit hours: **3 Credit Hours**

Prerequisite **None**

Course:

Table of Contents

1.	INTRODUCTION.....	3
2.	DESCRIPTION OF THE COURSE	4
2.1	Basic Assumptions	4
2.2	Structuring	4
2.3	Organization of the Practical Course.....	6
2.4	Examination	10
3.	PREPARATION.....	11
3.1	Introduction.....	11
3.2	Time Schedule.....	11
3.3	Assignment Description	12
3.4	The Project Plan.....	12
3.5	The Kick-off Meeting	13
4.	REALIZATION.....	13
5.	COMPLETION	15
	APPENDIX 1 : ASSIGNMENT DISCRIPTION	17
1.	Introduction.....	17
2.	Procedure.....	17
3.	Items of the Assignment Description	17
	APPENDIX 2 : THE PROJECT PLAN.....	22
1.	Introduction.....	22
2.	Procedure.....	22
3.	Basic assumptions.....	22
4.	Project organization.....	23
5.	Project Management.....	23
6.	Technical Procedure.....	24
7.	Quality Plan.....	24
8.	Planning.....	25
9.	Communication and PR.....	26
	APPENDIX 3 : THE PROGRESS REPORT.....	27

1. Introduction

Software Project Management is part of the BSc Software Engineering and Computing Technology program at School of Information Technology and Engineering. These courses have two components, the theoretical and practical components where the students learn both the principles of Software Project Management and apply it into their own projects. We focus on three particular issues. To begin with, the assignment will be carried out for a real client with a real IT problem (this time around with another Course instructor). Secondly, the students will work as a project team, and thirdly, the project team itself has to define the assignment in consultation with the client. Therefore, the first step to be made is outlining the clients's information system problem. The team will then analyze this problem and make design for its solution and implement it. Depending on the time limitation the implementation will be presented as software solution, design solution etc.

This course, Software project management aims at giving students an understanding of the issues related to project management and how to deal with different aspects of the project.

This guideline gives a rough outline of how the course and more specifically the project will run. First of all, a description of the how the course organized is given. It will explain how the course is built up by a number of sections. Next, these sections will be explained in more detail. The annexes describe the requirements to the various documents that will be produced during the project.

2. Description of the Course

2.1 Basic Assumptions

Requirements

In principle the basic courses (such as software engineering, database, and requirement engineering) must be concluded with a pass. But as it is outlined in the curriculum there is no prerequisites for it.

Further assumptions

This practical course has three special features. To begin with, the project is not carried out in an artificial environment using a fixed case description. There is a real company with a real problem (this time around the other instructor serves as a client and discuss the problem with him). Students can contribute to a (partial) solution of the problem. Secondly, initially the problem to be solved is only described in global terms. The point for students is to discover and organization's problem and to be able to describe it, while negotiating with the client. Thirdly, the course will be realised by means of a project, which means the group will work with a delivery scheme agreed upon with the client on a basis of planning and cooperation. This requires quite a bit from students and the student herself/himself is expected to take the initiative during the practical, it demands a highly active attitude. It also demands cooperation and fine-tuning within the project team. Communication, both internally and externally, may be regarded as the most important part of this course.

2.2 Structuring

During the project the students handle a certain problem. The client is a real organization with a real software problem. This client is prepared to have talks on the initially usually rather vague definition of the problem. The students position themselves as consultants. They are prepared to listen **critically** to the client, analyze the problem, and to suggest solutions and improvements for situations that emerge during the analysis. The client directs the project in terms of wishes, bottlenecks and expected results related to his information problems.

In the Project, students work in project teams. A project group is divided into task groups. The division into task groups depends on the case involved and may largely be decided upon by the students themselves. *(If possible- I don't think this will work but) there is a steering committee consisting of software engineering program team members, which also gives direction to the project. The directions of the steering committee are based upon the Universities' educational objectives and quality requirements. The steering committee can also be used as an advisory board; for instance, to test ideas that exist within the project group.* And finally, there is the project supervisor who organizes the course and coaches the projects. This involves the acquisition of assignments, division into teams, coordination of appointments with the steering committees and deciding on the final assessment. For questions on procedures concerning the project, problems within the team, personal matters etc., you can get help from the project supervisor.

Planning

To a large extent it is up to the students themselves to give shape to the way the project will be carried out, with respect to both content and process. However, the time available is divided into sections in order to offer some footing. These sections are:

Section	Name	Description	Time
1	Preparation	Outlining assignment description and initial project plan, Kick-off meeting with the client	Week 1 and 2
2	Realization	Realization of the project	Week 3, 4, 5, 6, 7, 8, 9
3	Completion	Final meeting and presentation to the client, steering <i>committee</i> and the supervisor	Week 10
4	Conclusion	Writing self evaluation	Week 11

Note:- Week represent the course duration weeks and week one starts October 10, 2023

The course will start on Tuesday, October 10 2023. Generally, the project should be concluded by 10 to 12 weeks. The actual final date depends on the discussion with the other instructor (client) and the supervisor. The personal evaluation and all documents produced must be handed in before the deadlines. Up-to-date information can always be mailed to the course groups you created.

2.3 Organization of the Practical Course

Project organization

Like any other project and as a software project management course, this project has a project management. This project management consists of one or two project managers. The project manager(s) are appointed from the group of students who form the project group. The project group themselves elect their own project manager(s). The project management has the following responsibilities, tasks and rights:

1. Responsibilities

- ☐ Realization of deliverables (results to be handed over to the client).
- ☐ Safeguarding cooperation within the project team (in particular: tuning the task groups).
- ☐ Signaling problems and reporting them to client and/or project supervision.

2. Tasks

- ☐ Controlling and adjusting the project plan.
- ☐ Leading, coordinating and motivating the task groups.
- ☐ Chairing plenary project meetings.
- ☐ Focal point for project supervisor.

3. Rights

- ☐ Making well-argued changes in project plan.
- ☐ Dividing work among task groups.

The project group defines a number of task groups. A task group carries out a number of coherent activities. A task group is coordinated by a coordinator. Among other things he

or she is responsible for reporting to the project management. Task groups do not necessarily have to exist throughout the duration of the project. Students may participate in several task groups. It is not intended for students to participate in just one task group only. At any rate, the following task groups will exist:

1. Quality control: this task group is responsible for the quality of the deliverables throughout the duration of the project, outlines monitoring procedures and checks that these are implemented.

This includes:

- ☐ Internal communication and consultation: consultative structure.
 - ☐ Reviewing: the review procedures and their observance.
 - ☐ Document management: procedures that can be used for managing the project files, determining templates, etc.
 - ☐ Besides, this task group makes sure the procedures are being observed.
2. Communication and PR: this task group is responsible for the organization of the external communication. This means a presentation is prepared; locations are booked, invitations sent, an announcement made on phone or email or what ever mechanism you created.

Apart from this there are of course several task groups to carry out the actual job, depending on the specific assignment.

Stakeholders

The client will try to control the project as may be expected from a client: he/she will focus on the desired product. The *steering committee* will safeguard the project from the academic point of view and is organized in the following way:

- ☐ Experts. These are one or two independent experts who supervise the realization of the project, with respect to both process and content. So in this case we are dealing with an internal steering committee in which the client does not participate. This differs from the common definition of a steering committee, which usually consists of project leaders from all interested parties.
- ☐ Supervisor: **note:** the supervisor is wearing two hats, that of lecturer and that of steering committee member.

The steering committee can be consulted on project developments during the realization of the project. The steering committee monitors the project's progress and, if necessary, can make adjustments. An important role of the steering committee is to control quality and external communication. The supervisors must have a general knowledge of the communication with the client. This means for instance that you have to inform the steering committee and/or the supervisor when you pay a visit to the client, and when the client approves (or disapproves) documents. Deliverables must be reviewed by the steering committee before being transmitted to the client, unless agreed otherwise. In special cases the supervisor can intervene into the group process. In general each group itself safeguards the motivation and participation of all its members, but when serious conflicts arise it is wise to contact the supervisor.

Meetings

During the project students work more or less independently on their tasks. Once a week each project group has the possibility to contact the supervisor through mail or other means such as phone. These moments of contact can be used to ask questions on the project's progress and to discuss possible problems. Apart from this there is a formal meeting called plenary project meeting.

The plenary project meeting

The main purpose of the plenary project meeting is to discuss the progress of the project with the team members. This allows for fine-tuning between the different persons and tasks within a project team. The plenary project meeting takes place once or twice a week and is chaired by the project manager. Minutes of the plenary meetings are written. The project group must file these minutes in order to enable the supervisors to read them if desired. The project group themselves must arrange the project meetings.

Progress control

The project group themselves must make arrangements with the client on how they will communicate about their progress. They report to the supervisor/ steering committee through mail. This concerns particularly the achieved results as concerns content in

relation to the objectives set, and the manner in which the group wants to continue. There is a two-weekly report to the supervisor/steering committee that is submitted by email (see appendix 3).

Finally, all group members keep a log of the time they spend on the different tasks within the project. In this way the project can monitor their efforts, and the supervisor can follow the progress. Maintain the report as realistically as possible and keep it for later reference.

Evaluation report

At the end of the practical course each student must write an individual evaluation report, following instructions that will be made available on this document. Since this evaluation will count rather severely in the final mark, it is important to give it sufficient attention. It may be useful to keep a log or something similar during the project, which you can use when writing your evaluation.

Documents and presentations to be produced

The results to be produced by the project (the deliverables) are described in the assignment description. Apart from this, the delivery dates of the deliverables are also stated in the assignment description. Deliverables must be understandable to the client. This means that if models are included in the deliverables, you have to make sure the client can understand them. The deliverables should not contain superfluous information. In other words: needlessly long documents are not appreciated.

The following reports will be produced, either for the supervision, the steering committee, or the client:

- ☐ Each student:
 - Weekly hours specification, to be delivered at the end of the course (see above)

- Presentations. Each student is expected to give one of more (partial) presentations. During the project at least, the following presentations will be given by the project group:
 - Presentation of the assignment description to the client.
 - Presentation of the results to the client.
 - Evaluation report. After completion of the project result each participant has to produce an evaluation on the way the team functioned and the personal role one played in it.

☐ Each group

- Assignment description: arrangements with the client.
- Project plan for the internal project organization, including:
 - Plan of action
 - Quality plan
 - Communication plan
- Deliverables as mentioned in the assignment description. Please note that every deliverable to be presented externally must be first reviewed by the supervisor/steering committee. This means they must have sufficient time to read the document and to make suggestions. The planning must allow for this review time.
- Two-weekly progress report (on Fridays by email, see Appendix 3).
- Just before finalizing, the teams will present their work to each other in a plenary session.

2.4 Examination

The assessment of the practical course is split up in several parts:

35%	Final Product (group assessment)
30%	Realisation of Project plan and related documents (group assessment)
35%	Evaluation (individual assessment)

The final product will be assessed mainly by the client, in the following manner:

- ☐ ‘Rubbish’

- ☐ ‘Of no use to us’
- ☐ ‘May be useful’
- ☐ ‘We will implement it’

The supervisor also will assess the product accordingly.

3. Preparation

3.1 Introduction

The preparation section is meant to define the project and to build up the project organization. To accomplish this number of activities are carried out which will be discussed below.

3.2 Time Schedule

The table below gives a suggestion for the activities to be carried out, the time in which this should be done, and when the work should be handed in.

Activity	Time	Result
Introduction, division into groups	Week 1	Group composition
Introduction on working in project	Week 1	
Clarifying assignment	Week 1, 2	List of questions
Meeting with client	Week 2	Report
Writing assignment description	Week 2, 3	Assignment description
Writing project plan	Week 1, 2,3	Project plan
Kick-off meeting at the organization	Week 3	Presentation

3.3 Assignment Description

In the assignment description the arrangements between the client and the project group are recorded. This is the formal mutual commitment. The assignment description must contain at least:

- ☐ Introduction, background
- ☐ Current problem situation
- ☐ Project goals
- ☐ Vision on problem and goals (by the project team): why do we believe we can solve this problem?
- ☐ Results
 - Deliverables
 - Milestones
 - Approach
- ☐ Arrangements on cooperation and limiting conditions
- ☐ Acceptation procedure

For detailed information on the assignment description see Appendix 1.

3.4 The Project Plan

The project plan is meant for the project group itself. It offers something to hold on to during the realization of the project in order to comply with the arrangements with the client. The supervision and/or the steering committee use the project plan to get an insight into the activities to be carried out, who will perform these activities and what the results will be. The project plan must contain at least:

1. Project organization
 - Tasks, powers and responsibilities of the different persons involved
 - Definition of the environment of the project group
2. Project management
 - Management targets (what do you want to achieve with this project team)
 - Assumptions and dependencies
 - Risks and risk control
 - Progress control

3. Technical procedure
 - Methods, techniques and tools
 - Support (configuration management, etc.)
4. Quality plan
 - Documentation
 - Reviewing
 - Internal communication
5. Planning
 - Work packages and milestones (e.g. with Gantt Chart)
 - Interdependencies of activities (e.g. PERT diagram)
 - Required resources
 - Resource allocation
6. Communication and PR

For further requirements to the project plan, see Appendix 2.

3.5 The Kick-off Meeting

The kick-off meeting will take place once the assignment description has been written, and has been approved by the client. The project team is supposed to present this description to the client, including the way in which they feel they can tackle the problems. The deliverables will be explained. The presentation is meant to make the client enthusiastic about the project team's approach. The client may also ask for final, minor adjustments to the assignment description.

4. Realization

The realization phase starts in week 3 and ends around week 10. The project group themselves must make a planning for the realization phase. Once the final arrangements about the project have been made with the client the realization can start. Since the realization highly depends on the specifics of each project general guidelines can hardly be given.

A few suggestions:

- Information may be collected by taking interviews, examining annual reports, making a prototype, etc. In case of an interview, keep in mind that appointments must be made in time. Prepare your interviews well and give feedback to the persons you interviewed.
- Some clients are highly focused on specific solutions. In this case you will have to think along very discerningly with the client whether this will actually solve their real problem. Other clients have absolutely no idea what they want, only some vague idea. In that case you have to set out potential directions for the solution path when the problem is clear.
- The used language should be English. Sometimes a client has special requests about the language in which a document is written. Make clear arrangements about this in advance.
- Furthermore, it is highly recommended to opt for semiformal techniques such as data flow diagrams, process models and UML diagrams in order to clarify the description. For example, organ-grams may prove useful, as well as tables pointing out who is the ‘problem owner’ of a certain problem. For the analysis of a problem it may in some cases be useful to make a cause-effect graph. Usually the client is not an information expert. Therefore, make sure all techniques, diagrams and similar are readable to the client.
- At a certain moment, solutions will have to be devised for identified problems. One method to find these solutions – though certainly not the only one – is to do some brainstorming. It is important to generate as many alternatives as possible.
- Next, the alternatives must be weighed in order to reach a solution that will be then be studied in more depth. Criteria must be made for this. These criteria may be partially devised by you, but should certainly be indicated and verified by the client. After this a choice will come out that will be presented to the client.

5. Completion

Concluding project

Each project is completed by handing over the deliverables and giving a final presentation of the main results to the client. This will take place in week 11 approximately. This completion must be carefully prepared since the client's acceptance depends on it.

During completion a number of activities are carried out. The final (definitive) version of the documents will be collected. Two sets are made:

- ☐ One set of documents consisting of all documents intended for the client
- ☐ One set of all documents (including for example the project plan) intended for the supervision

Besides, a presentation is prepared in which the main results are discussed. Also the path that was followed to get to these results will be briefly discussed, especially when it led to interesting intermediate results. It is also important to suggest potential future steps to the client. This presentation will be given during the last meeting with the client and will have to be discussed before with the supervisor.

Organizing the last meeting with the client is a separate activity. The task group 'Public Relations/Communication' will carry this out. The organization comprises at least the following tasks:

- ☐ Drafting agenda
- ☐ Setting the date
- ☐ Arranging location (preferably at the client's)
- ☐ Making and sending invitations
- ☐ Making and distributing announcements
- ☐ Arranging logistics (beamer etc.)

Concluding Project

After the project has been concluded correctly at the client's, the practical course itself must be concluded with an evaluation and an assessment. The time schedule runs as follows:

Activity	Time	Results	Delivery
Final Presentation to the client	Week 11	Client: deliverables Supervisor: assignment description, project plan, deliverables	Week 11
Writing individual evaluation	Week 11	Personal Evaluation	Week 11

Appendix 1 : Assignment Discription

1. Introduction

This appendix gives the outlines of what is required from the assignment description. Also some leads are given as to how to achieve such an assignment description.

2. Procedure

The assignment description is written on the basis of the information present at the start of the practical course. Besides, one or more interview with the client is planned in the second week of the project. Making a good assignment description is difficult. This is why a first draft is asked for. There will not be much information available to write this first draft. Questions will come up while writing the description. Ask the client these questions in the second week. After that, write a second draft of the assignment description. Now use the additional information obtained from the client and use the comments to the first draft from the supervisors. Thereupon make a final version based upon comments from the supervisors and upon written comments from the client. A similar procedure is followed when writing the project plan, except this one will not be communicated with the client. *Keep in mind clients and the steering committee usually does not agree on assignment descriptions at first!*

3. Items of the Assignment Description

The assignment description must consist of at least a number of items. These will be explained in the following sections.

Project Data

Client	Name company and contact
Name of Project	Appealing title
Project Participants	Name, e-mail, telephone
Planned work load	In hours/days (which ever is convenient for you)

Introduction

The introduction gives an outline of the background of the assignment and what sparked it off. Pay attention to the relevance of the subject to the client, and its relation to any other activities of the client.

Problem definition

The problem definition gives a description of the client's problems. It is important to distinguish the problem definition from the objectives. The problem definition shows, from a client's point of view, the problems a client is facing in a certain area. The objectives on the other hand, show which targets the project group have set themselves and how these targets can be measured. This means the project group is not expected to solve every problem from the problem definition!

Well-written problem definitions unravel problems into component problems. It may be wise to make a division into causes and consequences of problems, thus creating a cause-effect graph that will give a better understanding of the client's problems. The problem definition has to define the problem. Apart from this a problem definition gives the order of priority of the (component) problems. It is important to motivate your choices. A client must be convinced why certain things are problems and why they are important or less important. Clients also like to be sure that the project group have a very clear idea of what the problem really entails. One important purpose of writing the problem definition is therefore to reach an agreement with the client.

Objectives

The section on objectives basically contains two items:

- ☐ The targets to be achieved by the project group
- ☐ The method used to measure whether the targets have been achieved

The targets to be achieved must be coherent with the problem definition. Broadly speaking, what was written about the problem definition applies to the objectives too. The targets to be achieved must be ordered in terms of priority with an underlying

motivation. The targets to be achieved must be so detailed that activities to reach the targets can be defined.

A few suggestions:

- it is impossible to exactly define at the start which results will be achieved, because discovering and defining the results are virtually always part of the project. It is therefore recommended to add a clause to the assignment description that will allow for an adjustment or refinement of the assignment as soon as the desired products can be better detailed. Another method is to make use of a multistage approach in which initially only an analysis the problem is offered and at a later stage (part of) a problem is actually solved.
- Experience teaches that good problem definitions and objectives are difficult to write whereas these are essential to a successful project. They make the key component of the assignment description.

Therefore, pay ample attention to the writing of the problem definition and the objectives. Make sure the objectives are formulated in a SMART way:

- Specific – no vague descriptions
- Measurable – what is ready when it is ready?
- Apparent – for whom and what?
- Realistic – therefore feasible
- Time limited – when is it ready, when will it really work?
-

Vision to problem definition and objectives

It is good to show the client that the project group has its own vision concerning the formulated problem definition and objectives. The client wants to be convinced in particular that the project group is capable to realize the formulated targets. To this end an outline of which strategy the project group will adopt to realize the targets must be made. In this respect one can think for example of a certain system development approach that is fit to realize the objectives. The choice for which strategy to be followed must be well motivated in order to convince the client of the right approach.

Planning

Deliverables

A list of products to be delivered must be composed in which each product is described in a few lines.

Activities

The activities to be carried out must show a clear vision on the manner in which the targets are to be achieved. The activities to be carried out must be closely related to the vision on the way the objectives that have been laid down are to be achieved.

The activities must be concrete enough to make a planning. Keep in mind the activities are specific to the project and do not apply to each project. The activities must be linked to aspects concerning the contents of the project.

Milestones

Milestones must be defined in such a way that it is possible whether they have been achieved. State:

- name of the milestone,
- planned date,
- description of the milestone, and
- if necessary which deliverables will be ready.

Overall planning

The overall planning will integrate the deliverables, activities and milestones into a well-organised and comprehensive whole.

Progress reporting

Throughout the project reports must be made for the client (apart from those for the supervisor and the steering committee), following the agreement layed out in the assignment description. Indicate how and when you will report progress.

Agreements on cooperation

When cooperating, it is wise to lay down special agreements in advance. You may think for instance of machines, the language to be used, how employees within the organization can be contacted, etc.

Acceptance procedure

At the end of the project the client will determine whether the delivered product meets the expectations.

Define in advance how the client will test this and which steps are involved in the acceptance process.

Additional conditions

Special conditions that could not be filed under one of the previous sections may be mentioned under the heading 'additional conditions'.

Appendix 2 : The project Plan

1. Introduction

The project plan is the second important document for the realization of the project. It indicates who must carry out which activities in which order and what the result will be. The project plan must assist the project team to better manage and carry out the project. This means it is not a deliverable for the client.

2. Procedure

The project plan has to be consistent with the assignment description. It is therefore laid out in relation with the assignment description. The list of activities to be carried out and their estimated size can be used to assess the feasibility of the objectives in the assignment description. It is therefore sensible to develop the assignment description and the project plan more or less simultaneously.

An assignment description is written in consultation with the client and will be signed by both parties at a certain moment. After that, barring exceptions, the assignment description will not change any more. The project plan is subject to changes during the course of the project. Certain activities may take more or less time than originally planned. Alterations during the course of the project must therefore be included in the project plan. There is a major difference between planning and realization. Data concerning realization, such as for example realized deliverables and activities carried out, are not included in the project plan and do not induce a new project plan. However, differences between planning and realization can certainly be a reason to adjust the remaining part of the project plan. The project plan must consist of at least a number of parts. These will be illustrated in the following sections.

3. Basic assumptions

Problem definition and objectives

The problem definition and the objectives are directly related to the assignment description. Therefore a reference to the assignment description will suffice here.

Deliverables

Under the heading Deliverables the documents to be delivered are summed up, with a brief clear description of their contents.

References

Sometimes documents have been used to write the project plan. List these documents under the heading references.

4. Project organization

Tasks, powers, and responsibilities of the different persons involved

Within the project group different persons have different tasks, powers and responsibilities. Besides, persons may participate in different task groups. Agree on who has which tasks, powers and responsibilities in the project team. Indicate for example who is in charge of project management, who is responsible for quality control, etc.

Defining the environment of the project group

Define the environment. Stakeholders at any rate the client and the steering committee. Indicate what the project group expects from this environment.

5. Project Management

Management targets

Indicate here which targets (members of) the project group wants to achieve.

Assumptions and dependencies

In projects, it often occurs that the ability to perform planned activities is based upon several assumptions. Make these explicit. Sometimes there are also things the project group depends upon. Indicate these.

Risk control

A risk is a possibility that an event threatening to the project or the project group occurs, being a matter of force majeure (for example illness). Therefore the untimely delivery of

deliverables is not a risk as such. Risks have to be identified, along with measures to cover them.

Progress control

Various parties, but at least the project management, must be capable to control the project's progress. Clearly put, this means they should have a view as to when tasks must be delivered, who carries out which tasks, and when action must be taken in case tasks cannot be finished in time. Indicate in which way the project management should control progress.

6. Technical Procedure

Methods, techniques and tools

Methods, techniques and tools may be used throughout the project. Indicate what this use involves. Mind the relationship with the chosen strategy to realize the project.

Support (configuration management, etc.)

Indicate in which way project support elements have been taken care of.

7. Quality Plan

The quality plan plays an important part within the project plan. The quality plan must indicate which procedures will be used during the course of the project in order to make its results meet certain demands. It consists of a number of items:

Documentation plan

The documentation plan describes the structure, layout and management of the documents to be produced. Each project document is written in a uniform style, and can thus be recognized as a document from the project. At least prescribe that a document must contain: the author(s), reviewer(s), revision history (including the author who made the alteration and the reviewers who reviewed the alteration), a version number and a status indication. A possible table of content for the document plan:

- ☐ Objectives of the documentation plan
- ☐ Document style (which styles and corresponding attributes)

- Attributes of the document (e.g. author) and the possible values of attributes (for a status indication you should be aware of the stages a document may be in)

Review plan

The review plan indicates which procedures are valid as far as reviewing is concerned, and how these are implemented. The plan must state that documents that are to be sent to the client must also be reviewed by the steering committee/the supervisor, unless agreed otherwise.

Internal communication plan

The internal communication plan describes the internal consultative structure within the project.

8. Planning

Planning is a very important part of the project plan. It is recommended to make the planning with project planning software, such as MSPProject.

Work packages, sub-projects, activities and milestones

At least indicate which activities there are, how they relate and what the activities will produce. Also indicate when milestones must be realized. Sometimes activities can be grouped in sub-projects or work packages. Indicate whether there are dependencies between activities, the order in time, or concerning data flows and results.

Resource allocation

Identify the resources. These are persons, equipment or money. In this project it will mainly concern man hours. The availability of resources and the needed effort will determine the running time of the various activities in the project, and vice versa. Allocate resources in the form of persons to activities. Make sure that one person does not work like 50 hours a week at the project whereas another person only works 5 hours. Show to which extent each project member is assigned at any moment.

9. Communication and PR

The plan for communication and PR pays attention to the promotion of the project to the client and the supervisor. The plan has to contain a number of promotional actions. Think how to organize the final meeting with the client, sending the invitations, and such. Planning the communication with the client and others will enable you to involve these parties into the project.

Appendix 3 : The Progress Report

The progress report must be handed over to the project supervisor every two weeks by email. It is a **brief** description ($\frac{1}{2}$ A4 max.) of the project's progress: what have you done and what will you be doing? The report contains the following items (some of which may be empty):

- ☐ Name of project
- ☐ Date report has been written
- ☐ Name of writer
- ☐ Report period: day.month.year until day.month.year
- ☐ Briefly indicate the state of affairs concerning the project:
 1. Work done during the report period and results delivered.
 2. Deviations from the planning: which deviations, why, and what will be the consequences (will a new planning be needed, or can it be met within the present planning).
 3. Bottlenecks – how these will be dealt with
 4. Planned activities for the next period
- ☐ Self-assessment: General self-assessment of the way things go (excellent / good / reasonably / poor) with motivation

