FALTA EL THORICAL PLANNING

**C.1. DEVELOPMENT LIFE CYCLE MODEL**

The system shall be developed according to a software life cycle model of “incremental and iterative” type, using the following phases at each increment: requirements analysis, design, coding, unit tests, integration tests and deployment.

There shall be four milestones for each intermediate and final product: at the end of the requirements analysis, at the end of the design, at the end of integration tests and at the end of the installation.

The following chart summarizes the above points:

\* 3 increments

The following restrictions shall be considered when organizing the different tasks:

\* The requirements analysis shall be performed in a unified way for the whole system/increment.

\* The phases of design, coding and unit testing can be performed in parallel for each of the possible subsystems considered at each increment. They shall begin once the requirements analysis has been revised. Each subsystem implementation shall begin once the subsystem design has been revised; unit testing shall begin once implementation is finished.

\* For each increment, the integration testing phase shall begin when all the unit tests of the various subsystems are completed.

\* The installation phase shall start once the integration tests have been revised

**C.2. STATISTICAL PARAMETERS**

The following historical data on development productivity and preparation of documentation are available:

\* Development productivity: 15 FP / person-month

\* Preparation of documentation: 0.5 pages / FP

Where FP means Function Point.

The effort distribution for each increment, according to the historical database is as follows:

**C.3. AVAILABLE HUMAN AND TECHNICAL RESOURCES**

**C.3.1. Human Resources**

\* 1 system analyst, with a cost of 400 euros/day.

\* 1 “senior” designer, with a cost of 350 euros/day.

\* 2 “junior” designers with a cost of 200 euros/day.

\* 1 systems technician, with a cost of 300 euros/day.

**C.3.2. Hardware Resources and Development Software**

The organization has the necessary equipment for the development of the project. Costs and its use are 1,050 euros/month, including both hardware and software.

To develop the project, three workstations must be acquired with a cost of 1,650 euros per station. Another workstation is needed for performance testing with a cost of 3,200 euros.

A new integrated development environment shall also be acquired, at a cost of 1,100 euros per workstation. This environment includes all necessary software for the lifecycle of the project.

**C.4. TEAM ORGANIZATION**

The following table shows the participants in each of the development phases:

Requirements Analysis Systems Analyst

Design Systems Analyst

Designers

Coding and Unit Tests Designers

Integration Tests Systems Analyst

Designers

Installation Systems Analyst

Systems Technician

In addition, a person acts as project manager, being in charge of carrying out all the project management tasks with a cost of 400 euros/day.

During the design phase, the analyst shall divide his time between the different subsystems, if there are any, in equal parts. The rest of participants and phases are assumed to have full time dedication to each of the subsystems they participate on during each phase.

Notes for elaborating the schedule

a) The maximum level of detail for each Gantt diagram shall correspond to each of the phases of the lifecycle chosen for each increment and to each activity. The creation of the diagrams and the associated reports shall be performed using the MS-Project tool.

b) If you decide to use a parallel design by subsystems, once the analysis phase is finished, the design, coding and unit tests phases should be broken down for each subsystem.

The standard working calendar to be considered is from Monday to Friday, with 40 business hours and 22 working days/person-month. Vacation time should not be considered.