**PGPI**

Práctica 5

Estimates

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# Estimated Project Budget

## Estimated I + D Budget – Global View



### Personnel View



The average salary for each different type of worker was calculated using the sources detailed at the bottom of the document. The salaries for each worker take into consideration the number of months they are required to work for (we currently assume we will be paying our workers on a monthly basis and not an hourly basis) and an average of 39.3% salary that will be destined to taxes and social security. This leaves us with a formula much like this one:

Total Salary = Work\_Months \* (Base\_Salary \* (1+TAXES\_AND\_SS))

Vacation time and other festivities are encompassed in the number of work months the worker works for, so it won´t be needed to be added to the formula. Doing all the calculations leaves us with a total of 70604,01€.

### Execution View



The execution costs will take into consideration all materials needed for the development of the project and its further use in the company. With that we can assume the **phones, computers, monitors and furniture** will be used in the company for future projects. We also remove the **amortization** that the use of the furniture and computers will provide for the project.

The project will either develop using new technologies or use existing free software to create it, so we won’t be adding software costs. There will be a need to **investigate new technologies**, so costs involving this investigation and a **legal and ethics report** regarding the project will be needed to be developed.

We have estimated the number of **pens, paper, office food consumption and office maintenance costs** that will be needed to be done during the development time of the project.

Additionally, in the last stages of the project there will be a need for a **transporter** to move the servers into a localized building in Granada, be this one of the hospitals or a different one.

The total costs of this view are 18553,75€.

### Complementary View



Complementary costs will firstly take into consideration the costs needed to be done, at the start of the project, to investigate the hospitals in Granada and its current systems. We estimated the worker in charge of this task need **travel costs, stay costs and diets** in order to eat.

Additionally, we don´t expect to need the diffusion of pamphlets or posters to be needed for our project, as at most it would use a virtual website to publish its results.

We will use most of the total cost of this view in the teaching of our working personnel, this would take into consideration the teaching of all the developers, the web designers, the documenters and possibly the medical staff involved.

All the calculations lead us into a total of 26240€.

## Estimated Budget – by Tasks

In order to make the estimated budget detailed by tasks, we will be grouping the tasks beforehand so that we can avoid much of the clutter caused by minor tasks.

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Personnel Involved | Duration (Days) | Total (€) |
| Preparation | System Architect | 0,5 | 120,73 € |
| Design Leader |
| Programmer Leader |
| Economist |
| System Analyst |
| Risk Analyst |
| Quality Expert |
| Cyber Security System |
| DB administrator |
| Presentation | Team Leader | 3 | 724,35 € |
| Economist |
| Risk Analyst |
| Quality Expert |
| Cyber Security System |
| DB administrator |
| Development of module 1: Drug Management | Programmer Leader | 79,25 | 19134,95 € |
| Programmer Team |
| Design Leader |
| Design Team |
| System Architect |
| Project Boss |
| Development of module 2 | Programmer Leader | 42,25 | 10201,28 € |
| Programmer Team |
| Design Leader |
| Design Team |
| System Architect |
| Project Boss |
| Development of module 3: Medical Staff Communication Channel | Programmer Leader | 42,25 | 10201,28 € |
| Programmer Team |
| Design Leader |
| Design Team |
| System Architect |
| Project Boss |
| Documentation | Programmer Leader | 36,667 | 8853,26 € |
| Programmer Team |
| Design Leader |
| DB Administrator |
| Cyber Security Expert |
| System Architect |
| Project Leader |
| Deployment and Infrastructure | Programmer Team | 77 | 18591,68 € |
| Installation Team |
| Delivery | Project Boss | 11,5 | 2776,68 € |
| TOTAL | - | 292,417 | 70604,205 |

It´s important to detail that our company will be paying its workers on a monthly case and not based on their worked hours, since we assume the workers will keep working on different projects after this one is done. Due to this, the budget by tasks will simply assume the estimated cost of each task regarding worker budgets in the project.

## Flow Table



Taking all the calculations shown in the I+D estimate we developed the flow table. In the flow table we divided the total cost of our workforce and steadily decided to spread it during unit of development time. Additionally, most purchased goods and equipment was added in month 0 of the development cycle since these items will be needed for the development of the project. Furthermore, we plan on separating the personel training of our company in 2, the first bulk being before the software development is started and the second bulk before the final tasks are needed to be realized.

We will also be utilizing a half way pay system, where the project will receive 43.75% of the projects total cost at its halfway point, in order to fully be able to pay for the development of the project and the rest of the pay at the end.



We developed to 2 VAN calculations, each with a different loan and interest rate on this loan. We calculated that an 11% interest rate each quarter would make the project viable, while a 4% interest rate every semester would make it not viable. After calculating the VAN, we calculated the TIR of our sequence and discovered that our project would give us a 11% internal return.

## Sources

* System Analyst Salary:
  + <https://www.indeed.es/salaries/analista-de-sistema-Salaries>
* Software Developer Salary:
  + <https://www.daxx.com/blog/development-trends/it-salaries-software-developer-trends-2019#:~:targetText=Software%20Engineer%20Salaries%20in%20Europe%2C%20February%202019&targetText=French%2C%20Finnish%2C%20and%20Dutch%20developers,to%20%2455K%20per%20year>.
* Visual Designer Salary:
  + <https://www.glassdoor.es/Sueldos/visual-designer-sueldo-SRCH_KO0,15.htm?countryRedirect=true>
* Software Documenter Salary:
  + <https://www.google.com/search?rlz=1C1CHBF_esES822ES822&biw=1919&bih=959&ei=-cLFXYyBDsv4aIyzgpAP&q=software+documentation+salary&oq=software+documentation+salary&gs_l=psy-ab.3..0i30.2365.3921..4023...0.0..0.101.818.8j1......0....1..gws-wiz.......0i7i30i19j0i19j0i8i7i30i19j0i13i30i19j0i13i5i30i19j0i7i30.8HAqn6c06bw&ved=0ahUKEwjM4b3SrdvlAhVLPBoKHYyZAPIQ4dUDCAs&uact=5>
* Basic Server:
  + <https://www.macnificos.com/qnap-tvs-951x-servidor-nas?gclid=EAIaIQobChMI3L2kkp7R5QIVB_hRCh2NHAl_EAYYBCABEgJP7_D_BwE#sku-QNA0297>
* Contracted transporters:
  + <https://www.google.com/search?rlz=1C1CHBD_esES870ES870&ei=zG7AXa-rOJClUqWrtogB&q=salario+transportista&oq=salario+transportista&gs_l=psy-ab.3..0j0i30l2j0i8i30l6.3385.4344..4456...0.1..0.106.745.8j1......0....1..gws-wiz.......0i71j0i13j0i13i30j0i8i13i30.jfkqw3BniIg&ved=0ahUKEwivwbnVmNHlAhWQkhQKHaWVDREQ4dUDCAs&uact=5>