UNIVERSITAT POLITÈCNICA DE CATALUNYA

DELIVERABLE 3: BUDGET AND SUSTAINABILITY

Design of an environment for solving pseudo-boolean optimization problems

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Chapter 1

Self-assessment on sustainability

During my studies, there have been different activities related with sustainability. It is a must that ICT[1] students know the effects of the solutions they will develop. ICT are currently releasing the 2% of greenhouse gases[3] which is more than the aerospace industry. Not only this, the electronic waste is difficult to recycle and they end up in poor countries[2] condemning people to an unhealthy life.

This form[2] helped me to realize what are my strengths and weaknesses about sustainability: environment, economic, and social.

As explained before, we have a good education about sustainability and we are aware of ICT problems. I am very conscious with all the environmental problems ICT are causing because all the activities I had done in the past but I do not know how this problems can be solved at global level. I think it is a very hard problem and it has to be solved as soon as possible. On the other hand, I had not been aware about economic and social impact until some months ago. The moment when I understood that was when Uber appeared in Spain[1]. I am not going to discuss who was right but how a mobile application could affect the society and the economy (of the taxi collective in this case).

It is hard to predict which effects will have an ICT solution and I realized doing the form that it has not been my priority in my past projects. Do not misunderstand this, of course I want to improve the world with my projects but side effects are hard to predict.

In conclusion, I would say that I am conscious about the sustainability problems of ICT solutions but not how they can be solved. I am also not aware of the footprint of my past projects.

sustainability economic social enviornmental generacio didees

[1] Information and communications technology

[2] Cuestionario de Estudiantes de Ingeniería Informática

Chapter 2

Analysis of the sustainability of the project

	PPP	Shelf Life	Risks
Environmental			
Economical			
Social			

TABLE 2.1: Sustainability Matrix

TODO DELETE: proyecto puesto en produccion

2.1 Economic Dimension: Budget

2.1.1 Direct costs

Aquellos atribuibles a una unidad de proyecto. Tienen relación directa con la fabricación de un producto

Human Resources

Els sous els hem tret de X

Role	Estimated hours (h)	Price/hour (€)	Total cost (€)
Project manager	136	46	6.256
Software Engineer	177	25	4.425
Computer Science	137	25	3.425
Total			14.106

TABLE 2.2: Human resources

2.1.2 Indirect costs

Aquellos NO atribuibles a una unidad de proyecto

Amortizacion agencia tributaria
Anos amortizacion maximo 6 per lo tant un 16.66% per any. Vol dir que valor actual del pc = 431.52€
li queden 3 anys de vida aixo es 11.97 al mes. lutilitzarem durant 5 mesos per tant 58.86 EUR del PC

Hardware

Product	Price (€)	Units	Useful life (y)	Amortization (€)
Lenovo IdeaPad U330T	899	1	6	
Total				

TABLE 2.3: Hardware resources

Software

Product	Price (€)	Units	Useful life (y)	Amortization (€)
GitHub	6,10/month	5	N/A	30,5
GitHub student pack	-6,10/month	5	N/A	-30,5
Clion	6,90/month	5	N/A	34,5
JetBrains Product Pack for Students	-6,90/month	5	N/A	-34,5
Atom	0,00	1	N/A	0,00
TeXstudio	0,00	1	N/A	0,00
Total				0,00

TABLE 2.4: Software resources

Some text

Other

Product	Price (€)	Units	Total (€)
Internet connexion			
Power consumption			
Total			

TABLE 2.5: Other resources

2.1.3 Contingency

Contingencia: permite atenuar errores de información incompleta o descuidos marcos 15% sino factor huss 50%

Product	Price (€)	Percentage	Total (€)
Direct costs			
Indirect costs			
Total			

TABLE 2.6: Contingency

2.1.4 Unforeseen

some text xD

Unforeseen	Cost (€)	Probability (%)	Total (€)
Broken computer	1.300	5	65
Initial stage			
Iteration 1			
Iteration 2			
Iteration 3			
Final stage			
Total			

TABLE 2.7: Unforeseen

2.1.5 Total budget

some text

	Cost (€)
Direct costs	
Indirect costs	
Contingency	
Unforeseen	
Total	

TABLE 2.8: Total budget

2.1.6 Control management

2.2 Economic Dimension: Reflection

2.2.1 PPP

2.2.2 Shelf Life

2.2.3 Risks

2.3 Environmental Dimension

2.3.1 PPP

Vamos a medir en KWh.

$$E = W \times T$$

2.3.2 Shelf Life

2.3.3 Risks

2.4 Social Dimension

2.4.1 PPP

2.4.2 Shelf Life

2.4.3 Risks

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