



**BUSINESS PLAN:
TECHNICAL-MINING AND
ENVIRONMENTAL CONSULTING**

AUTHOR: M^a Belén García Fernández

TUTOR: María Jesús Muñoz Torres

FINANCE AND ACCOUNTING DEGREE

FC1049: DEGREE FINAL WORK

ACADEMIC YEAR: 2017/2018

SUMMARY

This paper aims to analyze the viability of initiating a technical-mining and environmental consulting. Extractive activities have a strong impact on the environment, producing serious effects on it. This is why the hardness and lack of flexibility in the current legislation on mining and the environment. This project seeks to provide services to the owners of extractive activities of natural resources, with the ultimate aim of restoring the affected environment and producing the least possible impact. In order to analyze the feasibility of this project, a complete business plan will be developed, carrying out an analysis of the environment, market, service provision and commercialization, organization of the company and human resources, together with an economic-financial analysis. The results of the project will provide us with an estimate of its viability and a projection of future results. Books, websites and mining and environmental legislation have been consulted for this purpose.

INDEX

1. INTRODUCTION	5
1.1 OVERVIEW AND JUSTIFICATION OF THE IDEA.....	5
1.2 LOCATION OF THE ACTIVITY	6
1.3 SERVICES OFFERED.....	8
1.4 MISSION, VISION AND VALUES.....	10
2. BACKGROUND ANALYSIS.....	12
2.1 ECONOMIC FACTORS	12
2.2 SOCIAL FACTORS	16
2.3 LEGAL FACTORS	20
2.4 ENVIRONMENTAL FACTORS.....	22
3. MARKET ANALYSIS	23
3.1 CLIENTS	23
3.2 COMPETITIVENESS.....	27
3.3 SUBSTITUTIVE PRODUCTS	30
3.4 SWOT.....	30
4. SERVICE PROVISION	31
4.1 SERVICE PROVISION PROCESS	31
4.2 OUTSOURCING.....	32
4.3 PROCUREMENTS	32
4.4 QUALITY PROCEDURES AND CONTROLS.....	33
4.5 APPLIED TECHNOLOGY	34
5. COMMERCIALIZATION OF THE SERVICE.....	35
5.1 MARKET PENETRATION	35
5.2 DETERMINATION OF PRICES.....	35
5.3 MARKETING	37
6. COMPANY ORGANIZATION AND HUMAN RESOURCES	38
6.1 JURIDICAL FORM	38

6.2 FORMAL ASPECTS OF THE CONSTITUTION	39
6.3 WORKSTATIONS AND WORK AREAS	41
7. FINANCIAL ANALYSIS.....	43
7.1 ESTIMATED INCOME	43
7.2 INVESTMENT IN FIXED ASSETS AND FINANCING.....	44
7.3 INCOME STATEMENT FORECAST	47
7.4 BALANCE SHEET FORECAST	49
7.5 INVESTMENT ANALYSIS.....	52
7.6 ANALYSIS OF RATIOS	54
8. CONCLUSIONS	57
9 BIBLIOGRAPHY	59

1. INTRODUCTION

1.1 OVERVIEW AND JUSTIFICATION OF THE IDEA

In this work, we will study the possibility of creating a company based on technical mining and environmental consulting to mining operations in the provinces of Castellón and Valencia. To carry it out, a feasibility study will be carried out considering several factors such as the available resources, the offer to be made and the existing market and its different characteristics.

Due to the current situation of mining activity, which has very restrictive and inflexible legislation, and the present situation of the labour market, which has improved considerably compared to previous years due to the crisis, a really favourable situation is expected for the implementation of this type of advice. The fundamental objective is to stay for long and create a reference as an improvement of the services currently offered on the market, trying to satisfy all potential clients who need an individual, personalized service which must be both efficient and correct. To get this aim, an attempt will be made to offer a range of basic environmental and mining services, which although it may not be the most comprehensive on the market, does encompass the most important concerns regarding environmental and mining law requirements.

It should be noted that mining activity in the Comunidad Valenciana has an enormous economic importance in itself and because of its high added value, as it supplies raw materials to strategic sectors in the economic development of the community itself such as the tile industry, the building sector, infrastructure, etc. However, this economic importance of the mining sector has an environmental impact as a result of its activity. This impact is reflected on certain elements of the physical environment such as soil, biodiversity, water resources, landscape and the socio-economic environment, a factor that acquires a special importance in the Comunidad Valenciana because it is a territory with high population density and high potential for tourism in the developing interior.

Since the mid-1980s, mining operations have had an obligation to restore the surface area affected by their activity, and since the 1990s, the environmental impact assessment has required the owner of the mining operation to apply the corrective measures imposed to mitigate, reduce or eliminate the impact on the physical and socio-economic environment. In addition, the administration requires, for all mining-related activities, the presence of a person with a mining engineer profile to ensure compliance with the mining legislation.

Therefore, due to the obligatory presence of a Mining Engineering graduate (or equivalent) on the exploitation, the obligation of restoration, compliance with corrective measures, etc., as well as the existence of a high number of mining operations and in addition to a large number of non-restored hollows, the creation of an advisory service focused on technical-mineral and environmental assistance to the exploitation for environmental compliance and restoration is proposed.

In other words, it is about studying the strategy that provides coverage through this service to mining activities in force, from the beginning to their definitive cessation of exploitation work, through advice for the recovery, rehabilitation and restoration of the natural space affected by mining activity as well as for future mining operations to be authorized, and for the abandoned former mining holes.

Therefore, we want to offer a complete service, from the beginning to the end of the extractive activity or simply a punctual service at any stage of the process, in addition to any other types of advice in the field that corresponds to us.

1.2 LOCATION OF THE ACTIVITY

The fundamental objective for the choice of our registered office is based on equidistance with the different clients, in the possible limits, since it is obvious that an exploitation of natural resources will not be in the middle of the city. Therefore, the most convenient location will be taken into account.

Our business area will initially focus on the provinces of Castellón de la Plana and Valencia (without renouncing to expand into other provinces in the future), where mining operations are spread across the different villages of the provinces (in the section 4.1 Clients is specified). This is why our company's registered office will be located in Sagunto, due to the not disproportionate equidistance between the northern limit of Castellón and the southern limit of Valencia. The office where the office work will be performed will be rented, as we believe it will be the best option for starting the business. It will be located, if possible, on the outskirts of Sagunto, in order to make it easier for us and our clients to move around. In addition, we estimate that the renting of the premises with the characteristics we need will involve an expense of around 500 €/month.

Illustration 1: Map of Spain. Comunidad Valenciana situation.



Source: Google maps (2017).

Illustration 2: Comunidad Valenciana Map.



Source: Google (2017).

1.3 SERVICES OFFERED

SERVICE SPECIFICATION

Our company will try to offer technical assistance services in mining and environmental matters to extractive companies of natural resources. The product offered to companies in the mining sector is actually technical assistance service throughout the life of the mining project, from its conception or inception with the search for resources, exploration, research, calculation of reserves, design of projects and continuous monitoring of it, until the definitive abandonment of the exploitation.

This abandonment of work must be authorized by the responsible body, after the recovery, rehabilitation and restoration of the affected surface, and the verification of compliance with security and corrective measures, as expressed in Article 88 of the Mining Law (Law 22/1973), Article 112 of Regulation (R. D. 2857/1978, August 25th), Article 167 of the General Regulation of Basic Mining Safety Standards. (R.D. 863/1985, of 2 April) as well as article 5.7 of Royal Decree 975/2009, of 12 July, on the management of waste from the extractive industries and the protection and rehabilitation of the space affected by mining activities.

Thus, among the different services that our company offers, the following stand out:

- Assistance services throughout the life of a project: From its conception, its environmental impact study, restoration plan, etc., until obtaining the necessary authorization or administrative concession necessary for the owner to start the activity.
- Continuous advising in all the extractive process and recovery of the affected surface: control of water, ground, erosion, selection of plant species that can best be adapted, etc.
- Treatment of all the necessary information with thematic cartography.
- Control of dust emissions into the atmosphere.
- Preparation of a complete annual dossier.
 - o Risks sheets for each situation, machinery, installations, etc.
 - o Health and safety document
 - o Internal Security Provisions in all types of situations and actions.
 - o Restoration balance sheet
 - o Mining statistics
 - o Occupational Risk Prevention
 - o Etc.

- Relationship with the administrations: For the delivery of documents, defence of projects, inspection, etc.
- Advice on obtaining new mining licenses through exploration and research.
- Etc.

USEFUL LIFE OF THE SERVICE

As for the useful life of our services, it will depend on the needs of the client or mining operator, since it can be a punctual, partial or sporadic service in time, or a full service from the beginning to the end of the mining operation.

With reference to a full service, it is important to differentiate whether mining operators have the right to exploit a mineral resource classified as section A) or section C). This differentiation is fundamental, since depending on it, an administrative authorization is obtained: Section A), or a concession of exploitation: Section C), according to Law 22/1973, of July 21, of Mines (B. O. E., nº 176 of July 24, 1973). This classification leads to a variation in the authorized period of time and thus to the useful life of our service.

To fully understand classification, it is essential to know the law that regulates it:

- Article 3 classifies mineral deposits and other geological resources for the purposes of the Law as:
 - Sections A), "those of low economic value and geographically restricted marketing...".
 - Sections B), includes "mineral waters, thermal baths, underground structures...". (This classification does not concern us)
 - Section C), comprises "all mineral deposits and geological resources not included in the foregoing...".
- Royal Decree 2857/1978, of 25 August, approving the General Regulations for the Mining Regime. (Official State Gazette, No. 295 and 296 of 11 and 12 December 1978).
- Article 5 of the current General Regulations for the Regime confirms the classification of mineral deposits and other geological resources; it confirms the classification in three Sections: A), B), C).

- Law 54/1980, of November 5, amending the Mining Law, with special attention to Energy Mineral Resources. (Official State Gazette, No. 280 of 21 November 1980).
 - Article 1.1 "The following are excluded from Section C) of Article 3 of the Mining Law of July 2, 1973, and constitute a new section called D), carbons, radioactive minerals, geothermal resources, bituminous rocks...".

To complete the foregoing information, Title III of the Mining Law and its Regulations regulate the use of resources in Section A), while Title V of the same Law and Regulations regulate the use of resources in Section C).

In addition, with regard to Section A), Article 28.2 d) of the General Regulations for the Mining Regime, already cited, states: "Time of duration of the authorization, which may not exceed that for which the applicant has accredited the right to exploitation". It should be noted that the Mining Administration limits the period of authorization of Section A) not only to the period of time of the applicant's right to exploitation, but also limits that period to reserves existing within the authorized perimeter.

With regard to resources in section C, Article 81.1 of the same Regulation states: "The mining concession shall be granted for a period of 30 years renewable for a further two equal terms up to a maximum of 90 years.

Therefore, in the case of full client service, the mineral resources classified as Section C) are granted for periods of 30 years, extendable up to a maximum of 90 years. In other words, the useful life of our services in a Section C resource operation would be 90 years maximum.

With regard to the operating authorisations classified as Section A), they are issued on a delimited surface area and for a period of time depending on the reserves, although this authorisation may extend both the surface area and the operating period. The experience of the different professionals with whom it has been discussed shows that the quarries in Section A) usually have a useful life between 30 and 50 years, depending on their reserves; therefore this would be our estimate.

1.4 MISSION, VISION AND VALUES

The mission of our company is to provide help through correct recommendations in the management of mining operations to our clients, especially from a perception of mining and environment, from our knowledge and resources, offering quality services, which

are expected to increase in the future. During the life of this company, we hope to be able to generate appropriate ethical values in the business world, where cooperation and mutual trust are the basic pillars.

The organization's long-term vision is to create a consulting firm that can successfully assist mine owners with mining and environmental issues, as well as specializing in the restoration and rehabilitation of mining exploitation. For this, we will have to prosper as a company, so that we can increase our presence throughout the Spanish territory. Expansion to other countries is not within our objectives, but if the company presents sufficiently good results, it should be weighed up as a great opportunity. Unfortunately, we can't talk about dominance or market share, because any company in the sector is older and more experienced. However, we do believe that growth is feasible and flexibility is the key to success. The support for the development and progress of our society is linked to the objective of progressing as an organization, and to achieve this, we will seek optimal results, responsibility and quality in the work, together with enthusiasm and care in the daily activity and the incorporation of outstanding experts, with the aim of continuous improvement.

Our values are, above all, those required by the competent bodies for the performance of our activity. However, we would like to point out that, in addition to objectivity and confidentiality, we are motivated by the idea of transmitting human values, which are often lost in the business world; honesty, morality, involvement, improvement or professionalism are among these

With respect to our objectives, we expect to have the ability to strengthen the company in the market by offering our knowledge and differentiation efficiently, highlighting an increased value to customers. This is thus represented by two types of objectives, short and long term. In the short term, we want to expand our range of services and increase our staff in order to cover the needs of a larger number of clients, always based on our perspectives and models. In the long term, we want to add to our offer smaller and therefore cheaper services, in order to achieve an increase in turnover, and later on, to start our activity in large cities, such as Madrid.

Based on these objectives, depending on the daily course of events, how the options and benefits that the company will have will emerge, the most appropriate decisions will be made.

2. BACKGROUND ANALYSIS

2.2 ECONOMIC FACTORS

After the period of crisis, Spain is in a process of slow but solid recovery, thanks to the different measures and reforms adopted. These reforms have been implemented in different areas such as banking, labour market, goods and services market, education, taxation, pensions and public administration. As an OECD study shows, Spain's increase in living standards is limited because of a very low increase in productivity. This bottleneck in productivity levels is due to under-investment in innovation and the return of capital to firms with reduced productivity. Moreover, the unemployment rate, although decreasing steadily, is still at rather high levels.






Illustration 3: Evolution of the General Government Deficit/Superavit in Spain (% GDP).



Source: Eurostat (2017).

As shown in Illustration 3, the percentage of public deficit over GDP has increased since 2007 as a consequence of the crisis period, with the worst data available in 2009 and 2012. However, from 2013 onwards, we can observe an improvement in this situation, until 2016 when the Spanish public deficit remained at -4.5% of the GDP. This latter figure is very positive, as Spain not only met its target, but this percentage was one tenth below the figure agreed with Brussels. In addition, the figures that Spain has agreed with the EU institutions, which it would have to comply with are: 3.1% of the GDP in 2017 and 2.2% in 2018.

Illustration 4: Economic Indicators: CPI, EPA (employees and unemployment rate), GDP, Total population.

Indicador	Periodo	Valor	Variación (%)	
IPC	4 2017M09	--	1,8	
EPA. Ocupados (miles)	2017T2	18.813,3	2,80	
EPA. Tasa de paro	1 2017T2	17,22	-2,78	
PIB	2 2017T2	104,8	3,1	
Población total (miles)	3 2017	46.528,9	0,19	
1. Valor en %. Variación: diferencia respecto a la tasa del mismo período del año anterior				
2. Índice volumen encadenado, ref. 2010. Datos corregidos de efectos estacionales y de calendario				
3. Cifras de población a 1 de enero de 2017. Datos provisionales				
4. Datos avance				

Aquí se muestra un gráfico en formato Flash

1. Para poder visualizarlo, se debe **utilizar el Visor Flash**
2. A continuación, en la ventana emergente que aparecerá, pulsar sobre el botón "Permitir".
3. La página se volverá a cargar mostrando el contenido en ese formato.

Source: INE (2017)

In Illustration 4, provided by the National Statistics Institute, we can see some of the indicators, referring to 2017: CPI, employed, unemployment rate, GDP and total population. These indicators show us positive data on an improvement situation in Spain, although not sufficiently high.

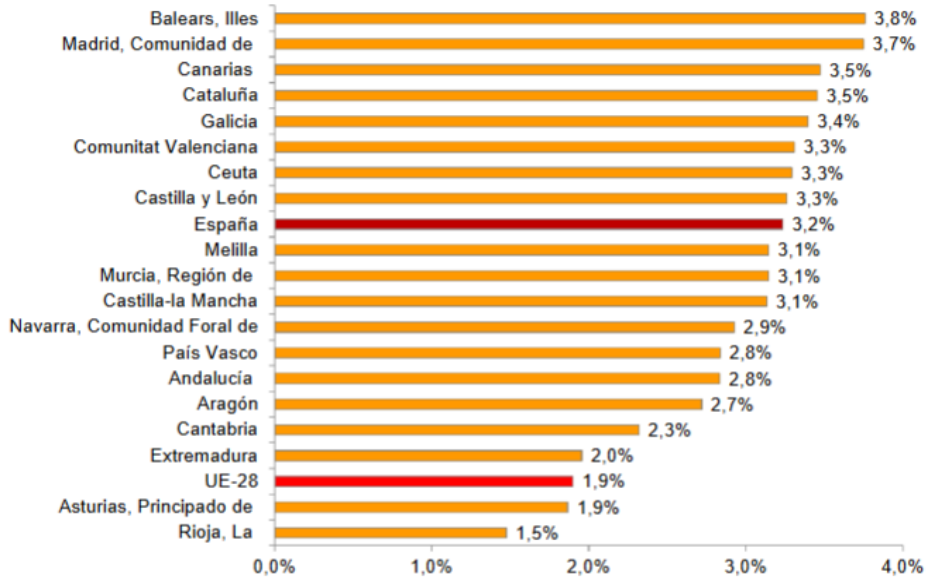
As for the CPI, its data to date are an estimate, as the actual ones for September are not known yet. This estimate is at an annual variation of 1.8%, with respect to the 1.6% of August, which means that if this indicator progress is confirmed, there would be a two-tenths increase in the annual CPI rate. If we speak about the employment rate, the data for the second quarter show a value of 18,813.3 people employed, causing an increase of 375,000 people with respect to the previous quarter, which means a positive variation of 2.8% in the employment rate. Unemployment rate is 17.22%. It has decreased 1.53 points with respect to the previous quarter and 2.78 points with respect to the previous year. This variation means that the unemployment rate in this quarter has decreased by 340,000 people and by 660,400 in comparison with the previous year.

Referring to the total Spanish population, in a very general way, at the beginning of 2017 the total population increased by 88,867 people with respect to 2016, thus standing at 46,528,966 inhabitants; these data mean a provisional variation of 0.19%.

As for the second quarter of GDP, it shows an increase of 0.1% with respect to the same quarter of the previous year, thus standing at 3.1%; in addition to a quarterly growth of 0.9%. It is worth highlighting the contribution to the annual growth of GDP of foreign demand by 0.7 points and domestic demand by 2.4 points. It is also important

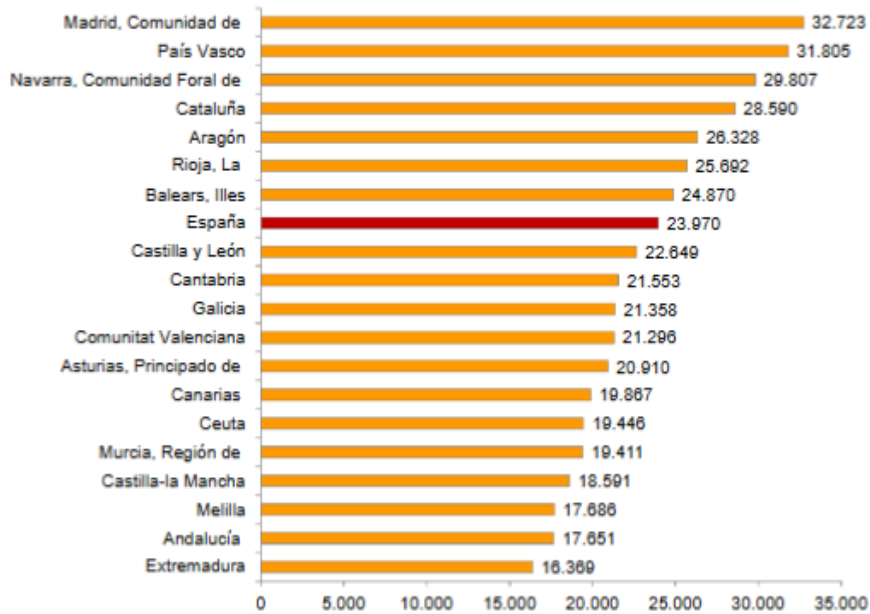
to point out that employment increases at a rate of 2.8% and that the unit labour cost for the corresponding quarter was -0.4%.

Illustration 5: Annual GDP growth rate in terms of volume per Autonomous Community. (2016)



Source: INE (2017).

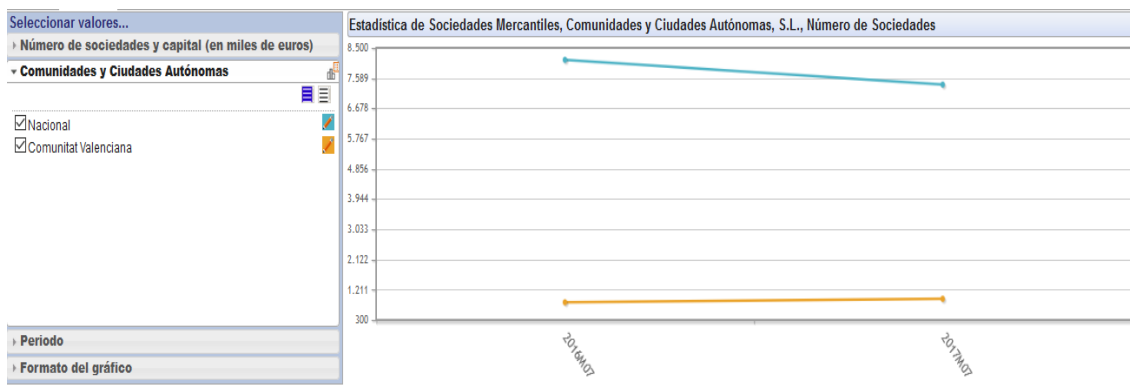
Illustration 6: GDP per capita in euro per Autonomous Community. Year 2016.



Source: INE (2017)

As for the annual growth rate of GDP in the Comunidad Valenciana, we can see in Illustration 5 that in 2016 it was 3.3%, 0.1% above the national GDP, while in other Autonomous Communities such as Navarre or Extremadura it was below. In addition, it is worth noting that practically all the Autonomous Communities have their GDP over and above the data estimated by the European Union (1.9%), except for the Principality of Asturias and La Rioja which presented 1.9% and 1.5% respectively. With respect to the GDP per capita in euros in 2016, it can be seen in Illustration 6 that the Region of Madrid was the one that obtained the highest figure with 32,723 €, and the community that obtained the lowest figure was Extremadura with 16,369 €. With an intermediate figure, but below the national total, the Comunidad Valenciana stands at 21,296 €.

Illustration 7: Limited Companies Incorporated at National Level and in the Comunidad Valenciana.



Source: INE (2017)

Illustration 8: Business confidence index in Spain and the Comunidad Valenciana.

	2017T3	2016T3	2015T3	2014T3
Nacional				
Indice de confianza empresarial armonizado	136,9	131,2	131,2	123,0
Comunitat Valenciana				
Indice de confianza empresarial armonizado	128,3	122,7	122,4	116,4

Source: INE (2017)

As explained above, the economic situation in Spain has gradually been changing in a positive way, which drives us to carry out this business idea, since we have a fairly optimistic scenario. With reference to this favourable environment, it can be seen in Illustration 7 that at the national level (in colour blue) the number of companies incorporated as Limited Company has decreased around 1000 units, from July 2016 to July 2017 (referring only to Limited Company) because our company will be incorporated as such). On the other hand, if we focus on the Comunidad Valenciana (in orange colour), since our scope of action will initially be the provinces of Castellón and Valencia, we can see an increase of 100 units, standing at 934 Limited Companies in 2017, a very positive figure for us. Finally, it is also important to notice the data shown in Illustration 8, which indicate an increase in business confidence both nationally and at the level of the Comunidad Valenciana, a figure that stood at 116.4 in 2014 and has risen to 128.3 in 2017.

2.3 SOCIAL FACTORS

The social factors are intimately related to the economic ones, even more so after the period of crisis in which Spain has been implicated. Due to different economic factors and their different results, there is an impact on society, which can be modified in a positive or negative way. This impact can occur in any social area, such as population number, education, level of education, culture and habits, etc.

Illustration 9: Population resident in Spain. Year 2017.

		Valor	Variación semestral
Población total	1	46.528.966	0,17
Hombres	1	22.835.674	0,13
Mujeres	1	23.693.293	0,20
Extranjeros	1	4.424.409	0,94

La suma de los datos desagregados puede diferir del total debido al redondeo

1. Datos de 1 de enero de 2017 (Provisional)

Source: INE (2017)

Illustration 10: Migratory movements. Provisional 2016

Movimientos migratorios exteriores - Provisionales 2016

	Inmigración	Emigración	Saldo migratorio
Total	417.033	327.906	89.126
De españoles	62.572	86.112	-23.540
De extranjeros	354.461	241.795	112.666

La suma de los datos desagregados puede diferir del total debido al redondeo.

Saldo migratorio = Inmigraciones - Emigraciones

Source: INE (2017)

As we can see in Illustration 9, the total population of Spain on 1 January 2017 was 46,528,966 people, which means an increase of 88,867 people (81,975 Spaniards and 6,892 foreigners) and a positive half-yearly variation of 0.17. As for the number of men, it has experienced a positive variation of 0.20 per semester and the number of women a variation of 0.13. Referring to the number of foreigners, they have increased to 4,424,409 inhabitants with a half-yearly variation of 0.94. In addition, we can see in Illustration 10 that the migratory balance of 2016 stands at 89,126, with a total number of immigration of 417,033 inhabitants and 327,906 emigrants. Of these last data, it is worth noting that the migratory balance of the Spanish population is negative (-23,540) due to the fact that immigration data are lower than emigration ones. This large amount of emigration may be due to the recent crisis, which has forced many young graduates to seek decent employment outside Spain.

Illustration 11: Population growth in Spain by Autonomous Community (2016).

	Población a 1 de enero		Crecimiento anual(*)	
	2017(*)	2016	Absoluto	Relativo (%)
TOTAL	46.528.966	46.440.099	88.867	0,19
Andalucía	8.409.657	8.403.774	5.882	0,07
Aragón	1.317.076	1.318.571	-1.495	-0,11
Asturias, Principado de	1.034.449	1.040.925	-6.476	-0,62
Balears, Illes	1.150.839	1.135.527	15.312	1,35
Canarias	2.154.905	2.135.209	19.696	0,92
Cantabria	581.477	582.504	-1.027	-0,18
Castilla y León	2.435.797	2.454.454	-18.657	-0,76
Castilla - La Mancha	2.040.379	2.048.900	-8.521	-0,42
Cataluña	7.441.176	7.408.290	32.886	0,44
Comunitat Valenciana	4.934.993	4.932.347	2.645	0,05
Extremadura	1.077.715	1.084.969	-7.254	-0,67
Galicia	2.710.607	2.720.102	-9.495	-0,35
Madrid, Comunidad de	6.475.872	6.424.275	51.597	0,80
Murcia, Región de	1.472.949	1.466.474	6.475	0,44
Navarra, Comunidad Foral de	640.502	637.486	3.016	0,47
País Vasco	2.167.707	2.164.066	3.640	0,17
Rioja, La	312.647	312.810	-163	-0,05
Ceuta	85.107	84.652	455	0,54
Melilla	85.116	84.764	352	0,41

(*) Datos provisionales

Source: INE (2017)

It is important to point out that in the Comunidad Valenciana there has been an annual growth of 2,645 people, thus increasing by 0.05% with respect to the previous year. Although this is not a very high increase, it is important because it shows some improvement with respect to other communities such as La Rioja, Castilla y León or Castilla la Mancha, which have a negative annual growth. The highest annual growth was recorded in the Community of Madrid, with an increase of 51,597 people and the highest negative growth was recorded in Castilla y León, with a loss of 18,657 people.

In recent years, Spain has been adversely affected by the crisis, both economically and socially. Between 2009 and 2013, average family income decreased considerably, labour market insecurity was fairly high and the long-term unemployment rate rose to 12.9 per cent, among many other effects. Nevertheless, the OECD points out that in 2016 health and life-work data are among the best, with an average life expectancy of 83.2 years. In terms of Spanish education, it is classified as medium-low with respect to the other OECD countries, due to several factors, including the low percentage of adults in productive age who had completed at least upper secondary education.

After consulting the latest report published by the Ministry of Education, Culture and Sport on Spain's public expenditure on education, the Public Administrations and Universities allocated 4% more in 2015 than in 2014, a significant increase that brought the expenditure to 46,648.8 million euros. If we focus on spending on non-university education, we are talking about an increase of 5% compared to 2014, allocating an amount of 32,538,676 € and this amount being 3.03% of GDP. Regarding university education, expenditure was 9,147,919 € in 2015, 2.9% higher than in 2014 and 0.85% of GDP.

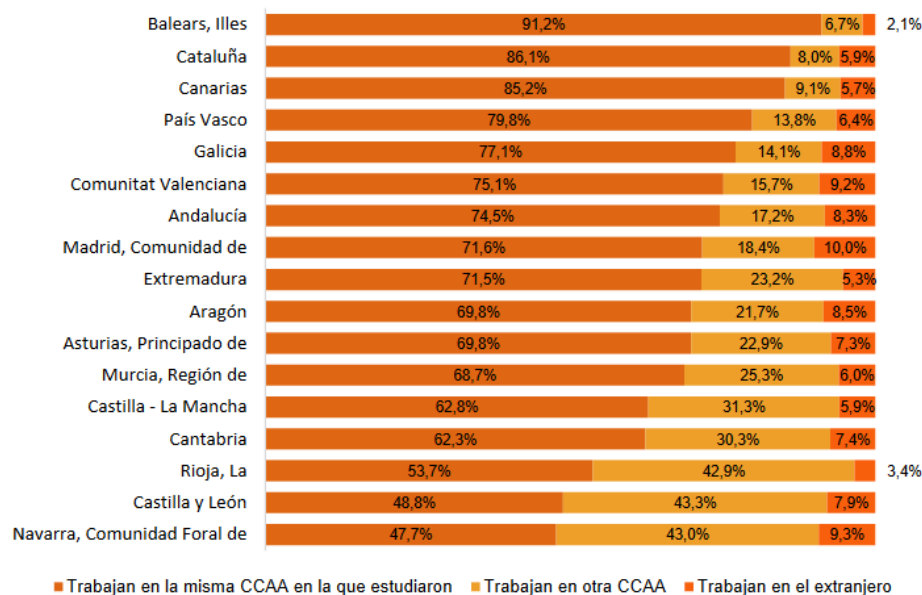
It is important to highlight the participation of the Comunidad Valenciana in this total public expenditure on education, which contributes 9% to the total national expenditure. This cost represents a figure of 4,210,757 euros with a positive variation with respect to 2014 (+1.1%). In addition, this contribution from the Comunidad Valenciana is one of the highest, together with that from Catalonia (13%), Andalusia (16.1%) or Madrid (10.3). The regions with the lowest contributions were Aragón (2.3%), Cantabria (1.2%) and La Rioja (0.6%).

Illustration 12: Activity, employment and unemployment rate by branch of knowledge in Spain for 2009-2010 course graduates. Year 2014.

	Tasa de actividad	Tasa de empleo	Tasa de paro
Total	93,6	75,6	19,2
Ciencias de la salud	94,7	81,3	14,2
Ingeniería y arquitectura	95,6	80,8	15,4
Ciencias sociales y jurídicas	93,2	74,2	20,4
Ciencias	92,2	70,0	24,1
Artes y humanidades	89,4	64,3	28,0

Source: INE (2017)

Illustration 13: Percentage of graduates 2009-2010 academic year by Autonomous Communities. Year 2014.



Source: INE (2017)

Analyzing the different university graduates of the 2009-2010 academic year in Spain according to their branch of knowledge (Figure 12), a total employment rate of 75.6% can be observed over 197,535 graduates. Of this total, 44,448 correspond to the Engineering and Architecture branch with an employment rate of 80.8%, and 104,836 correspond to Social and Legal Sciences with 74.2% employees. These two branches are the most important for our business, since the founding partners of the same will be a Graduate in Finance and Accounting and a Mining Engineer. As for the Comunidad Valenciana, it can be seen in Illustration 13 that 75.1% of the graduates who studied in the region's own universities are also working on it, which is quite encouraging. In

addition, 15.7% of graduates were working in other autonomous communities and only 9.2% abroad.

2.1 LEGAL FACTORS

The obligations imposed by current legislation on mining activities are set out in the following regulations:

a) Article 117.2 and 117.3 of Law 22/1973, of July 21, on Mines:

- "Exploration and research work shall be designed and directed by Mining Engineers, Geological Science Graduates; Technical Mining Engineers, Mining Experts or Mining Faculties".
- "When such work basically requires the use of geophysical or geochemical techniques, the above-mentioned competences shall be extended to graduates of Physical and Chemical Sciences, as well as to other university graduates recognised as having the corresponding specialisation".
- "In any case, operations that may affect the safety of property or persons or require the use of explosives must be conducted by Mining graduates".
- "Exploitation work must be designed and directed by qualified persons, in accordance with their respective competencies" (Article 117.3).

b) Article 143.2 and 143.3 of the General Regulations for the Mining Regime (Royal Decree 2857/1978, of August 25), which confirm article 117.2 and 117.3 of the Law.

c) Article 3, of the General Regulations on Basic Mining Safety Standards (Royal Decree 863/1985, of 2 April):

- "All activities included in these Regulations shall be under the authority of a responsible and qualified Optional Director as required by law".

d) Section 1.3.1 of the Supplementary Technical Instruction ITC 02.0.01. FACULTATIVE DIRECTIONS (ORDER OF THE MINISTRY OF INDUSTRY OF 22nd March 1988).

- "The Facultative Direction in the activities included within the scope of the General Regulation of Basic Mining Safety Standards will be developed by Mining Engineers, Mine Experts or Facultatives of Mines (article 117 of the Mining Law) according to their respective attributions".

e) Article 16 of Decree 23/2013, of 25 January, of the Consell, which establishes measures for streamlining and simplifying administrative procedures in mining matters.

- Article 16. APPOINTMENT OF OPTIONAL DIRECTORS. Nine (9) paragraphs.

f) Article 1, of Royal Decree 2994/1982, of 15 October, on the restoration of natural areas affected by mining activities:

- ... "to carry out the restoration work on the natural space affected by mining activity".
- "The Order of 20 November 1984 develops the Royal Decree 2994/1982 of 15 October".

g) Article 2 of Royal Decree 975/2009, dated 12 July, on the management of waste from the extractive industries and the protection and rehabilitation of the space affected by mining activities.

- 2.1. "This Royal Decree shall apply to all research and development activities of mineral deposits and other geological resources."
- SECOND TRANSITORY PROVISION. FILES IN PROCESS.

"The files that were in process at the entry into force of this Royal Decree shall be dealt with in accordance with the previous applicable legislation,..."

h) Article 4 of Decree 200/2004, of 1 October 2004, of the Consell de la Generalitat, which regulates the use of Appropriate Inert Waste in restoration, conditioning and filling works or for construction purposes.

- Article 4. Use of suitable inert waste in:
 - o RESTORATION WORKS. "This is understood to be those actions aimed at the restoration of mining activities, whether they are in operation or abandoned, in accordance with Royal Decree 2994/1982, of 15 October, on the restoration of natural areas affected by mining activities, such as the restoration....".

i) Article 7 of Law 21/2013, dated December 9th, establishes the scope of application of the environmental impact assessment and Annex I, Group 2. Extractive Industry, establishes the projects that must undergo ordinary environmental impact assessment. (In our case the resource holdings of Sections A) and C).

j) Article 5.1 of Law 2/1989, of 3 March, of the Generalitat Valenciana of Environmental Impact, prescribes that the environmental body formulate the impact statement.

k) Law on the Prevention of Occupational Hazards. Law 31/1995 of 8 November 1995. (BOE No. 269, of 10 November 1995) and Royal Decree 1389/1997, of 5 September, laying down minimum requirements to protect the safety and health of workers in mining activities. (BOE. No. 240 of 7 October 1997).

2.4 ENVIRONMENTAL FACTORS

Mining activity has a considerable impact on the environment, whether total or partial. The main root of this problem may derive from the initial phase of project planning, the design phase or the implementation phase itself. Regardless of the stage from which the problem originates, it is evident that the environmental impact occurs due to the actions carried out in these projects. These impacts and alterations are projected on different elements:

- The atmosphere.
- Surface water.
- Aquifers.
- The floor.
- Flora and fauna.
- Geophysical environment.
- Morphology and landscape.
- Socio-cultural environment.
- Socio-economic scope.

The environmental environment of mining operations is closely related to the activity of our business, being our purpose, above all, to comply with environmental legislation, and the observations or conditioning factors of the administration, in addition to compliance in mining matters. The environmental legislation affecting the owners of mining operations which began in 1986 with the Environmental Impact Act, is very broad

It is worth highlighting the aforementioned national law, Law 21/2013, of 9 December, on Environmental Assessment, currently in force, which establishes "... the bases that must govern the environmental evaluation of plans, programmes and projects that may have significant effects on the environment, guaranteeing a high level of environmental protection throughout the State, in order to promote sustainable development...". It is important to highlight the Autonomous Community Law 2/1989, of 3 March, of the

Generalitat Valenciana, on Environmental Impact and Law 6/2014, of 25 July, of the Generalitat, on Prevention, Quality and Environmental Control of Activities in the Comunidad Valenciana. In addition, there are a multitude of additional provisions: on water, waste generation and management, air protection, noise, protection and management of the natural environment, forestry and forest management, protection and conservation of the historical and cultural heritage, as well as provisions on spatial planning and town-planning.

3. MARKET ANALYSIS

3.1 CLIENTS

INITIAL MARKET AND CLIENT PROFILE

As stated above, before such a demanding regulation for the development of mining activity, the creation of this service company is designed to initially advise companies in the mining sector in the provinces of Castellón and Valencia. This advice is intended to ensure the correct regulatory compliance required and controlled by the competent bodies responsible for mining, due to the non-liberalization of mining activity, with the ultimate objective of recovering, rehabilitating and restoring the area affected by extractive activity.

Companies related to the mineral resource extraction sector or persons holding ownership of any mineral exploitation will be the potential clients for this environmental technical advisory service, as well as the owners of abandoned former mining hollows.

Consequently, final client profile will be the resource holders of Section A) or resources of Section C) under the current Mining Act, such as clays, kaolins, feldspatic sands, plaster, limestone, marble, construction sand, etc. These clients include individuals, communities of goods, limited companies and corporations.

POTENTIAL CLIENTS

After analyzing it, our potential clients are the holders of the mining rights existing in the provinces of Castellón and Valencia, so, after consulting the mining cadastre of the Directorate General of Energy Policy and Mines, the Ministry of Industry, Tourism and Trade, we obtained 248 mining operations in the province of Valencia and 115 mining operations in the province of Castellón, obtaining a total of 363 potential customers. In addition to this large number of potential customers, there are also the old mineral exploitations which abandoned the works or completed them before the 1980s without the obligation to restore.

Next, we analyse the active mining operations currently supplying the provinces of Castellón and Valencia:

a) Province of Valencia

Of the total 248 mining operations, 134 are in Sections A) requiring an operating permit and 114 are in Sections C) requiring an operating licence.

These are distributed throughout all the counties and municipalities of Valencia, such as: Ademúz, Puebla de San Miguel, La Yesa, Alpuente; Domeño, Audilla, Higuieruelas, Losa del Obispo, Villar del Arzobispo, Chulilla, Casinos, Titaguas, Loriguilla, Oliva, Buñol, Ribarroja, Sellent, Lllaurí, Villalonga, Real de Gandía, Paterna, Onteniente, Xativa, Cheste, Palama de Gandia, Turis, Utiel, Algimia de Alfara, Requena, Canals, Zarra, Sinarcas, Camporrobles, Casinos, Sagunto, Tuejar, Engera, Bellus, Vallanca, Cotes, etc.

Among the limited liability companies, limited companies or natural persons, owners of these farms, are:

- Sibelco Minerales S.A
- Sibelco Minerales Cerámicos S.A.
- Caoliníferas Cerrillo S.L
- Kaosa S.A
- Caolines La Piedra S.L
- Pascual Gabarda Gomez y Alberto Rodrigo La Huerta
- Transporte Garay S.L
- Esteban Nuñez, Juan Yotros
- Tierras Castellón S.A
- Sílices y Caolines S.A
- Levantina de Sílices y Arcillas S.L
- Tejas y Ladrillos del Mediterráneo S.A
- Sílices Serral S.L
- Ceramosa S.L
- Tierra Atomizada S.A
- Arcillas del Mediterráneo S.L
- Recursos Minerales Torgi, S.L
- Áridos Buñol S.L.
- Áridos Forna S.L
- Canteras y Áridos Lllaurí S.L

- Guerola, Árido y Hormigones S.L
- Aristaria S.L
- Pavasal S.A
- Cemex España S.L.U
- Enrique Platero Martínez
- Forbisa
- Corporación F. Turia S.A
- Durantia Infraestructuras S.A.
- Lafarge Cementos S.A
- Gomez Grau S.L
- Mármoles La Costera S.L
- Yesos Monrabal S.L
- Cales de la Plana S.L
- Cantera la Torreta S.L.U
- Triturados Cotes S.L
- Etc.

b) Province of Castellón

A total of 115 mining operations are obtained in the province of Castellón, of which 54 correspond to resources in Section A) and 61 correspond to resources in Section C).

The Castellón mining exploitations are scattered throughout the province: Villafamés, Sant Joan de Moro, Alcora, Useras, Segorbe, Onda, Ribesalbes, Vall D'uijó, Argelita, Lucena del Cid, La Jana, Traiguera, Castellnovo, Olocau, Morella; Todoella, Borriol, Torreblanca, Gerica, San Juan de Moró, Castellón, Altura, Almenara, Xilxes, Santa Madalena de Pulpis, etc.

Corresponding to the different owners of the exploitations, we highlight:

- Azuvi S.L
- Tierra Atomizada S.A
- Arcillas Mas Vell S.L
- Vega del Moll S.L
- Eugenio S.A
- Arcillas Pallares C.B
- Sibelco Minerales Cerámicos S.A
- Azuliber S.L
- Arcillas y Arenas Refractarias Pandols S.A

- Derivados Productos Cerámicos S.L
- Vicente Latorre Gallen
- Tierras de Castellón S.A
- Explotación Minera Vanesa S.A
- SINOR S.A
- D. PERIS S.L
- Arcillas Pallares C.B.
- Cantera La Torreta
- Pavasal Industrial S.L
- BPB IBERPLACO S.A
- Luis Batalla S.A
- Áridos Carot Selles
- Readymix Asland S.A
- Áridos Les Planes S.A
- Cales de la Plana
- Marmoles Serrat
- Etc.

After consulting the Quarry Registers Books (Resources of Section A), as well as the Mining Concessions Registry Books (Resources of Section C), of the Territorial Services of Industry and Energy, Mines Section of Valencia, the following data are obtained:

- Number of the latest approved quarry (section A): 1264 (of which 134 are active).
- Number of the latest mining concession in process (Section C): 3121 (of which 114 active).

Similarly, in the province of Castellón, the following data are obtained:

- Number of the latest approved quarry (section A): 554 (including 54 active quarries).
- Number of the latest mining concession in process (Section C): 2913 (of which 61 active).

These data have been obtained after consulting the website <https://geoport.al.minetur.gob.es/CatastroMinero/BusquedaBasica.do> (there is an advanced search) and the Mining Registry of the province of Valencia and Castellón (Mines Section).

These data mean that a large number of abandoned mining operations exist without any corrective measures applied to them and, of course, without restoring. They correspond to mining operations approved before the 1990s. The cause of this abandonment mines without restoring and without applying corrective measures, is due to the lack of a regulatory law at that time, which forced them to restore them and/or subject them to environmental impact.

These abandoned mining holes could also be part of our potential clients. In this way, our business expectation would increase considerably, since there are 4,137 old mining holes in Valencia and 3,352 in Castellón, making a total of 7,489. Thus, from such a high total figure, we could think that 1.33% would be involved in law enforcement and consequently demand our services. We could therefore add to our potential customers (363) this estimate of 1.33%, thus adding another 100 mines. In short, our customers would increase to 463.

3.2 COMPETITIVENESS

Competitiveness, according to Miranda (2004), "is undoubtedly the most threatening factor we can encounter. On the one hand, there are the current competitors, who are all those against whom we are fighting for the same customers at the present time, and on the other hand, there are those who may decide to enter this market because they find it attractive and have some advantage that offers them opportunities to compete.

Currently, at the national level, there are general consultancies, independent engineering professionals, environmental experts, companies specializing in the environment and mining, etc. Although competitiveness at the national level is not going to be deepened, due to several factors such as the company's youth, the need to make ourselves known, to acquire experience and to consolidate first at the provincial level, some companies are worth mentioning:

- GEODASA.
- E y P.
- Gestión Minera y Medioambiental.
- BIOSFERA consultoría medioambiental.

As for the provincial scope, which is the most important for our company, in the province of Castellón and Valencia there are at least 15 technical offices with a Mining Engineer or a Mining Technical Engineer on staff (a quite small number for the large number of existing mining operations). It should be noted that this information has been obtained after talking to experienced professionals in the sector. This is due to the

difficulty in finding web pages where we could be supplied the total number of offices of Mining Engineers in Castellón and Valencia. They can be found scatteredly, and not all of them, since many of these offices do not have a website or are registered in any of them.

The table below shows some of the main consultancies in the sector in Castellón and Valencia along with the type of services they offer. It has been compiled with the data collected from the different company web pages, and after speaking to some of them.

Table 1: Main competitors in Castellón and Valencia.

COMPANY	WEB	TYPES OF SERVICES
PROIME MEDIOAMBIENTE (Valencia)	https://plus.google.com/collection/gRDW9	<ul style="list-style-type: none"> - Environment - Waste - Mining - Engineering - Water and Discharges
J.N. INGENIERÍA (Valencia)	http://www.jingenieria.es/index.php?c=inicio	<ul style="list-style-type: none"> - Mining - Environment - Surface and groundwater - Waste - Industry - Civil Works - Geological cartographies - Risk assessment - Topography
GEMAV (Castellón)	www.gemav.com/	<ul style="list-style-type: none"> - Mining - Environment - Hydrogeology - Topography - Geotechnics
AGUA MINERÍA Y MEDIOAMBIENTE (Castellón)	https://es-es.facebook.com/AGUA-MINER%C3%8DA-Y-MEDIO-AMBIENTESL-155809257846528/	<ul style="list-style-type: none"> - Water - Environment - Renewable

		<ul style="list-style-type: none"> energies - Mining
<p>IMGA (Castellón)</p>	<p>No website</p>	<ul style="list-style-type: none"> - Environment - Mining - Water - Explosives - Waste - Geology
<p>IRF, Soluciones en Ingeniería (Castellón)</p>	<p>www.irfsoluciones.es</p>	<ul style="list-style-type: none"> - Industrial, Mechanical and Civil Engineering. - Environment - Mining - Health and safety - Urban planning

Source: Own elaboration (2017)

As it can be seen in Table 1, the different competitors do not only offer mining-environmental services, they also offer engineering, quality, geology, waste management, water, etc. services. The diversification of their services provides them with a reduction in risk, which is assumed by using only one line of business. Our company has this risk because it only offers mining and environmental advisory services. However, exclusive specialisation in this field can provide us with a great deal of experience and skills, as well as a greater degree of knowledge in this sector and therefore we will achieve differentiation from competitors.

Another differentiating factor with respect to the competition is the personalized service; it will be much more attentive, professional and efficient. Our professional team of professionals will be able to provide their services more quickly and in a more specialized and careful way, since other firms in the same sector have a greater amount of services to offer and therefore more work to do.

3.3 SUBSTITUTE PRODUCTS

In the area in which we are going to work, there are not substitute services. This is due to the normative linkage that makes certain actions, processes or reports. They can only be offered by experts in mining and environmental matters. In this situation, customers can only choose which company they want to work with.

However, there is a potential loss of clients due to competing consultancies and public administrations, which may increase their functions by providing more services and decrease outsourcing for certain jobs.

3.4 SWOT

Our company considers this analysis to be very important, because thanks to it we can discover certain aspects that affect it, both internally and externally, which we could not possibly take into account without carrying out this study. Therefore, inquiries regarding our threats, opportunities, strengths and weaknesses are reflected in the following table:

Table 2: SWOT.

THREATS	OPPORTUNITIES
<ul style="list-style-type: none"> - Mining and environmental regulations changing. - Consideration by some companies to dispense with environmental services. - Intrusion into the sector by environmental groups or local authorities seeking to shut down certain mines. - Dependence on the economic situation 	<ul style="list-style-type: none"> - Increasing environmental awareness. - Market growth. - Approach to SMEs. - Aid from the Public Administrations. - Mandatory nature of many environmental and mining services. - Existence of more services to be covered in this sector. - Possibility of opening new exploitations.
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - Absolute specialisation in the environmental and mining fields. - Proximity to the customer. 	<ul style="list-style-type: none"> - Very few commercial references. - Low valuation of certain jobs. - Reliance on outsourcing of larger

<ul style="list-style-type: none"> - Personalized customer service. - Efficiency and speed in the execution of services. - Possibility of expanding the service portfolio in the future. 	<ul style="list-style-type: none"> consultancy services or on different qualified professionals to carry out certain services. - Dependence on control organisms approved by the public administration.
---	---

Source: Own elaboration (2017)

4. SERVICE PROVISION

4.1 SERVICE PROVISION PROCESS

In this section, we will focus on describing the different processes that will be carried out to develop our activity, and offer the consumer an impeccable service. Therefore, the process that will be carried out for the provision of services will be as follows:

1. Client contact

This contact can be made in several ways: At the beginning of the business activity, a direct contact (through e-mail, personal visits) by the company will be necessary due to its youth in the market and the ignorance of potential customers. Later on, this contact may come from the client, who will already know about our services and will come for more information on a particular service.

2. Identification needs

After having established contact with the customer, either on our behalf or theirs, it is necessary to evaluate their needs. This evaluation will depend on the type of service.

3. Development of a solution proposal

Once the needs of the clients are known, the company will elaborate a proposal according to their characteristics. The evaluation of the proposal by the client is important, since if he is not satisfied, it would be necessary to modify the proposal.

4. Budget and negotiation

As soon as the proposal is completed, it is necessary to draw up a budget including a detailed quotation of services as well as the consequences and variation of the services due to modifications in the client's needs.

5. Performing the work

Once the budget has been drawn up, the work is carried out; it will vary according to the service to be provided, as well as the possibility of variations in the type of assistance (for both internal and external reasons) and therefore in the budget.

6. Final Report

Once the work is finished, the client is presented with the results obtained with the services they have contracted.

4.2 OUTSOURCING

As explained above, this consultancy provides mining and environmental services; our competitors offer a wider range of services. This situation may lead us to consider outsourcing certain services in case our customer requests them. Another reason for outsourcing may be the need for assistance in certain services that involve a high level of complexity. Therefore, the activities that are deemed to be subcontracted are:

- Specific studies: such as atmospheric, noise, soil and pollution studies, among others.
- Topographical measurements, which are large and of great importance as well as urgent, regarding the progress of exploitation, restoration, etc.
- Laboratory analysis: this type of analysis can be of pulvigenic risk (silicosis), atmospheric pollution, water, waste, etc.
- Different types of advice: legal, labour, etc.
- Employees - Collaborators

4.3 PROCUREMENTS

In order to provide the different services offered by our company, it is essential to have several supplies in office. They refer to all types of materials that any office needs. As for these, it is not necessary to have a very big stock because as they become scarce they can be replenished or replaced. Some of the supplies that will be needed are office supplies, furniture and computer equipment.

As for the furniture needed to start our activity, a couple of chairs, a couple of tables, two shelves, three drawers, two closets, a desk, a two-seater sofa, a projector and a screen are essential; estimated valuation at 3,750 €. For office supplies, we will need writing paper, folders, pens, erasers, pencils, markers, rulers, square, bevel, CDs, DVDs, pen drives, binding material, staplers, staples and toner, worth a total of 1,200

€. Finally, two computers and a printer, valued at 1,916 €, would be absolutely necessary to carry out the activity of our company. The total number of supplies required in the office to be able to carry out the service is 6,866 €.

It is essential to point out that our company is committed to the correct management of the supply and selection of suppliers that offer an adequate quality-price relation. After this correct management, it is possible to optimize the costs avoid wasting time due to lack of material.

4.4 QUALITY PROCEDURES AND CONTROLS

Our company considers the quality of the services to be offered to our customers and the level of satisfaction very important, therefore, we will implement a quality management system which can be adapted to their needs. With the establishment of this system, it is expected to increase sales, prevent any type of risks, reduce costs, create greater customer loyalty and achieve greater optimization of resources. Likewise, quality procedures and follow-up, preventive and corrective actions will be created and possible changes with which the quality system may be disturbed will be estimated.

In order to carry out everything related to the procedure and the quality system, we will create, in a satisfactory way for clients and organization, the policy that our company will follow in order to achieve the proposed goals. In such a way that it will determine the organization's orientation and intentions regarding quality. In addition, it should promote the participation of customers in surveys on the quality of the services offered, as well as the introduction of complaint forms available to customers.

As for the choice of the system itself, it is estimated that we will implement ISO 9001:2015, as this standard covers all aspects of quality management required for the activity of a company. In this way, we can manage and improve the quality of our services in a more effective way. Moreover, the implementation of this standard will benefit us in terms of attracting customers, as they value positively the companies that apply a correct Quality Management System.

4.5 APPLIED TECHNOLOGY

The improvement of internal processes for carrying out services, customer service and a rapid contact with the customer are factors that we want to achieve through the implementation of ICT tools (Information and Communication Technologies). In addition, the use of GIS (Geographic Information System) tools is indispensable due to the main services, such as specialized advice, that we offer. GIS is, at the same time both a database system for geo-referenced data and a set of operations to be able to work with such data.

The most relevant applications and software that our company will need to use in order to be able to carry out the business activity are the following:

- Pack Microsoft office 2010:
 - Excel: For performing calculations, analyzing information and viewing data in spreadsheets.
 - Word: To Create and edit professional documents such as letters, articles, reports and brochures.
 - PowerPoint: It allows you to create and edit presentations for slideshows, meetings, and web pages.
 - Office Picture Manager
- Autocad: To make all kinds of technical designs in 2d and 3d, plans, objects, cuts of objects, etc. (Topography).
- Civilcad: Software designed to create additional functions that automate and simplify tasks within AutoCAD.
- Internet Explorer: To interact with the various Internet pages.
- Adobe Acrobat: An application designed to view, create and modify files in PDF format.
- GVSIG: It is a Geographic Information System for thematic cartography.
- Global Mapper: Application that combines a full range of spatial data processing tools with access to an unprecedented variety of data formats
- Contaplus: Accounting application to keep the formal accounting of a company in a computerized way.
- USLE: To estimate soil erosion

All programs will be essential for the development of our activity and the optimal provision of services to our customers. The total cost of these, entails the purchase and updating of license, so we estimate that it will amount to a total of 5000€.

5. COMMERCIALIZATION OF THE SERVICE

5.1 MARKET PENETRATION

As far as clients acquisition is concerned, no commercial professionals will be hired, since the business activity does not require it for its proper functioning. The attraction of clients will be done internally through Internet advertisements, advertising and promotional actions, etc. The recruitment mechanism to be carried out by the company will be as follows:

- Making a first telephone contact with directors and managers of client companies (owners of mining operations) who may need mining-environmental services, with the intention of presenting the company and our services.
- Once the telephone contact has been established, we will carry out a study of the possible needs of the company to be visited, in order to present them with the most appropriate services.
- After estimating the most suitable services for the client, during the face-to-face visit with potential clients, we will have to make a presentation of the services according to the possible needs. Since contact with managers will be very limited, we must take advantage of the time of each visit and optimize the time through a previous preparation of the presentation.

After these first visits to clients, we can draw different conclusions. One of them could be the generation of interest on the part of the client towards the services that we have offered to him, and therefore, he asks us for a budget to compare our services and prices with his more frequent suppliers. Another option could be the lack of interest in our services; given this situation we will have to do more commercial work on the client in question.

5.2 DETERMINATION OF PRICES

As a technical-mining and environmental consultancy, pricing should be determined on the basis of working hours and complexity. After determining what the type of work will be and having an estimate of the costs involved in the specific service, we could already estimate the price needed to obtain a certain profitability.

As for the way of charging our services, it will be determined once the budget has been prepared and depending on its size and duration. If it is a small project, the customer will be charged at the end of the service. However, if the project is large, an advance payment of approximately 30% of the service will be agreed upon, to cover certain

expenses, and the rest will be paid at the end. In addition, some flexibility will be provided in terms of receivables in order to gain a competitive advantage not provided by these facilities.

After consulting with several professionals in the sector, we can estimate some of our prices for very general features, since it is impossible to estimate them specifically and accurately at the time we are. To this impossibility of knowing our real prices, we must add the inability to know a priori the magnitude of each mine, since it must be taken into account that depending on it the expenses will be reduced or increased:

Table 3: Price estimation.

SERVICE	PRICES
Assistance and monitoring of the operation project	3.000 € / u
Technical assistance in restoration work	300 € / month
Dust measurements	500 € / measurement
Research projects	2.500 € / u
Elaboration of a complete dossier(Summary and compilation of annual information)	2.300 € / u

Source: Own elaboration (2017).

5.3 MARKETING

As mentioned above, our company will not have professional sales representatives or advertising agencies. Therefore, the promotion actions that the company will carry out are as follows:

- Direct marketing:

This is a direct communication between advertiser and potential customer, where the consumer can respond quickly (Iborra, Dasí, Dolz and Ferrer, 2011). This type of commerce could be done by telephone or via the internet and it adapts to our needs. Through this kind of promotion, the aim is to create a positive image of the company and establish favorable relations with the different clients.

- Advertising:

Iborra, et al. (2011), explain that in advertising, the company (advertiser) transmits through mass media, commercial information relevant to the consumer in order to stimulate demand for its product or service. This is a unilateral method of communication (the consumer cannot communicate with the advertiser), impersonal and massive. Our company will conduct radio and press interviews, attend conferences and carry out any other type of advertising with the intention of informing and persuading the spectator/listeners.

- Personal sale:

It is an interpersonal communication, that is, between seller and customer, so that the seller develops his arguments while the prospective customer can express his doubts or discrepancies, thus having a two-way communication. It should be noted that communication is not massive but personal (Iborra, et al. 2011). This type of communication will be used mainly at the beginning of the business activity, conducting interviews with managers of the different mining operations, as mentioned in the previous section.

The total cost of the different actions in terms of marketing during the first year of activity amounts to €1,000.

6. COMPANY ORGANIZATION AND HUMAN RESOURCES

6.1 JURIDICAL FORM

As for the determination of the legal form to form our company, we have considered different possibilities, until finally we decided to form a Limited Company. This decision is based on the characteristics that constitute it, since we consider that they are favourable for our activity to undertake. As explained above, we want to compete in the market in order to grow and expand, and for that purpose we need to have a solid structure. Another point to take into account is the application of Royal Decree Law 4/2013, which states that for newly created entities with taxable income of less than €300,000, the corresponding tax rate is 15%, both for the first year and the following year with a positive taxable income. Therefore, the latest aspect is one of the definitive ones to support our impetus to form a Limited Company. The basic aspects of Limited Companies are as follows:

Characteristics:

- No minimum number of shareholders.
- Financial liability limited to the capital contributed.
- Minimum share capital of 3,000 €.
- Incorporation by means of granting of a public deed and registration in the Mercantile Registry.
- Corporate income tax.

Governing Organs:

- Board of Directors or sole Administrator.
- General Shareholders' Meeting: decision-making organ.

Rights:

- To influence the decisions of the General Shareholders' Meeting in proportion to the value of the shareholdings.
- To share in the distribution of profits and equity resulting from the liquidation of the company, in proportion to the number of shares held.
- The right to be elected as administrators.
- Pre-emptive right to purchase the shares of shareholders who leave the company.

Legal obligations (simplified accounting system):

- Bookkeeping (simplified arrangements).
 - o Inventory book and annual accounts.
 - o Daily book.
- Register of partners
- Outgoing invoice book.
- Recording of expenses.
- Cash accounts.
- Obligation to keep all books and documents for 6 years.

Applicable Law:

- Royal Legislative Decree 1/2010, of 2 July, approving the Law on capital companies.
- Regulation of the Mercantile Registry.
- Commercial law.

6.2 FORMAL ASPECTS OF THE CONSTITUTION

The formal aspects necessary to constitute our company as a Limited Company are next:

To register company name

To do this, we will go to the Mercantile Registry and request the negative certificate of company name. This document certifies the availability of the chosen name. Once granted, the name will be reserved for six months, although it will only be valid for three months until it is registered with the notary. If we go beyond this period, we should renew it. After six months, if the name has not been used, it would be publicly available to anyone again.

To open a bank account in the company's name

After obtaining the certificate, we will open a bank account in our company's name and deposit the minimum initial capital, 3,000 €. The bank will issue a certificate of deposit, which we must present at the notary's office.

Drafting of the Articles of the Association

The partners of our company must draw up all the rules that will govern the company, which will be incorporated in the public deed of incorporation. The content of these by-laws must have certain minimum elements, such as the company name, corporate purpose, date of closing of the accounts, capital stock, registered office, management system, among others.

Public deed of incorporation

The signing of the public deed of incorporation must be done before a notary, with a small cost, usually a percentage of the capital. To obtain the deed, it will be necessary to provide:

- Negative certification from the Central Mercantile Registry.
- Articles of Association of the company.
- Original ID cards of the founding members.
- Bank certification of the cash contribution to share capital.
- Declaration of foreign investments, if any of the partners are foreign, which is not our case.

Registration in the Treasury and census declaration

After signing the deeds, it will be necessary to go to the Tax Office to obtain the provisional tax identification number of the company, as well as the identification cards and labels. To do this, we must provide:

- The completed model 036.
- The photocopy of the signatory ID cards.
- The photocopy of the deed of incorporation of the company, obtained from the notary.

Therefore, we will be assigned a provisional tax identification number, which will be valid for six months within this time we must exchange it for the definitive. Subsequently, we will have to present model 036 of the census declaration together with the registration in the Economic Activities Tax, indicating which are the activities we will carry out and the beginning date.

Registration in the Mercantile Register

We must register the company with the Mercantile Registry of the province in which we have established the registered office. To do this, we have a period of two months from the date of obtaining the deed of incorporation and it is necessary to provide the following documentation:

- Authenticated copy of the deed of incorporation of the new company.
- Negative certification of company name.
- Copy of the provisional tax identification number.

Obtaining the definitive Tax Identification Number

As a last step, we will have to go back to the Tax Office and exchange the provisional tax identification number card for the definitive one, once the constitution of the company has been effectively registered.

6.3 WORKSTATIONS AND WORK AREAS

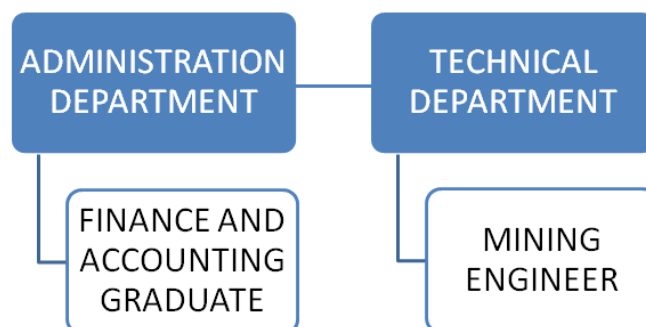
Our company will be made up by two employee partners, who will contribute the necessary capital in equal parts (each of them 1,500 €). The training of entrepreneurs is basic and necessary to be able to carry out the activity, so the first entrepreneur is a Graduate in Finance and Accounting and the second one is a Mining Engineer. The latter is essential to carry out our activity, due to the requirement by law of a graduate with these characteristics to carry out work in mining operations, as we have already explained. Of course, it is important to have his work because of his knowledge of the subject. In the event that our market share together with the growth and expansion of the company increases considerably, the possibility of hiring an additional person with a degree in Mining Engineering, Mining Technical Engineering or Environment will be valued.

As for the different jobs, initially they will be developed by the two partners who want to found the company. Each of them will have a different position and areas of work to perform, always within the same level of mandate regarding the most important decisions of the company. In addition, they will complement each other, since a single area would not be able to carry out the company's entire activity. The following explains the work that each graduate will do in his/her position and area of work:

- Graduate in Finance and Accounting: He will be in charge of managing the day-to-day management of accounting, administration, human resources, marketing, relationship with notaries, tax consultancy, etc. It should be explained that this department is the one that will communicate to the Engineer the available budget to cover expenses. In addition, it will support the Mining Engineer in certain aspects and works. The work carried out by this partner will be mostly in the office, with the exception of extraordinary occasions.
- Mining Engineer: Responsible for the technical part of this company, direct contact with the client and visiting them. This department is in charge of carrying out the services we offer: from environmental and mining consultancy to the elaboration of projects, among others. It will be necessary for the Engineer himself to visit the mining operations in order to be able to assess their magnitude, estimating the services that have been demanded. He will be in charge of finding the different professionals and other subcontractors necessary to carry out certain services. He will prepare the necessary budget to carry them out, which will be delivered to the administration department. The graduate in Finance and Accounting will have to assess the benefits and possible budget the company has to cover these expenses. After the evaluation, the administration department will proceed to contact the Engineer to approve it, or to ask him/her to reduce the expenses. In terms of carrying out the work, it is estimated that around 60% will be carried away from the offices, in the different mining operations, while office work will take 40% of the time.

After the above, we present the organization chart of our company:

Illustration 14: Organizational Chart.



Source: Own elaboration (2017).

7. FINANCIAL ANALYSIS

7.1 ESTIMATED INCOME

As explained in point 7.2 above, it is quite difficult to determine actual prices at the moment, since we will not have the necessary data until we start operating. After starting our activity, we will be able to obtain our real costs depending on the services required and the size of the mines, in addition to any other costs that could not be estimated at this time. However, thanks to seeking several mining professionals advice, it has been possible to make a very general average estimate of our prices could be, and of our possible income. In addition, for this estimate, we have estimated that we can achieve at least 10.5% of our 463 potential clients, in the first year, i. e. around 48 potential real clients.

Table 4: Estimated income from services. Year 1.

SERVICE	PRICING ESTIMATE	CLIENTS (10,5%)	INCOME
Assistance and monitoring of the operation project	3000 €/unidad	11	33.000,00 €
Dust measurements	500€/medicion	15	7.500,00 €
Technical assistance in restoration work	300 €/mes	12	43.200,00 €
Research projects	2500 €/unidad	5	12.500,00 €
Elaboration of a complete dossier (Summary and compilation of annual information)	2300€/unidad	5	11.500,00 €
	TOTAL	48	107.700,00 €

Source: Own elaboration (2017).

Table 5: Estimated income by service provision. Year 1,2,3 and 4.

	YEAR 1	YEAR 3	YEAR 3	YEAR 4
INCOME	107.700,00 €	113.085,00 €	118.739,25 €	124.676,21 €

Source: Own elaboration (2017).

We can see from table 4 that the estimated income per service delivery for the first year is €107,700, which is based on a total of 48 clients, which is 10.5% of potential clients. In addition, according to Table 5, we assume that our demand will increase and so our revenue. This increase is valued at 5% annually, a percentage that we have estimated cautiously and realistically. This way, there is an increase of 16.976,21 € from year 1 to year 4.

7.2 INVESTMENT IN FIXED ASSETS AND FINANCING

In this section, we will explain the initial investments that we must make in terms of fixed assets, in order to start our project, and how to finance it. Fixed asset is essential for our company because without it, we would not be able to not carry out our tasks. Therefore, in order to know the amount of our investment, it is essential to observe Table 6, which will be detailed later on.

Table 6: Investment of fixed assets.

CONCEPT	PURCHASE PRICE
Computer software	5.000,00
Information technology equipment	1.916,00
Electronic equipment (Dust meter)	2.400,00
Motor vehicles	22.000,00
Furniture	3.750,00
Other property, plant and equipment	1.200,00
TOTAL FIXED ASSETS	36.266,00

Sorce: Own elaboration (2017).

Firstly, computer software is needed: Pack Microsoft office 2010, Autocad, Civilcad, Internet Explorer, Adobe Acrobat, GVSIG, Global Mapper, Contaplus and USLE (detailed in section 4.5 Applied Technologies). These are essential for our activity and amount to a total value of 5,000 €. The information technology equipment is indispensable fixed assets to carry out our work, which is why we would have a couple of computers and a printer, valued jointly at 1,916 €. As for electronic equipment, our company will obtain a dust metre valued at 2,400 €, which is small in size, so that the engineer can take it with him when he visits the different mines, and thus measure the pollution in the environment. Motor vehicles are essential, since it is necessary to travel to the different mining operations, especially on the part of the engineer. Therefore, we will have two vehicles valued at 22,000€. To furnish, different pieces of furniture are required: 2 chairs, 2 tables, 1 meeting table, two shelves, three drawers, two

wardrobes, a two-seater sofa, a projector and a screen, all valued at €3,750. Last but not least, the office equipment, which is contained in other fixed assets items: office stationary, rulers, set square, cardboard, CDs, DVDs, pen drives, binding material, staplers, staples and toners, valued at a total of 1,200 €. All this investment in fixed assets adds up to a total value of 36,266 €.

Due to the lack of resources to make the investment, as we are at the beginning of the business, it is essential to find a good source of external financing. To this end, we will list different types of funding that we have taken into account, to explain the funding that we have chosen and its application:

- CESGAR (Spanish Confederation of Reciprocal Guarantee Societies).
- FIEM credits (Fund for the Internationalisation of Enterprise).
- ICO (Instituto de Credito Oficial) credits.
- ENISA, a national innovation company.
- Autonomous Communities.
- Crowdfunding.
- FFF (Friends, family and fools).
- Business angels
- Venture capital
- Private equity

Finally, we have opted for the loans offered by the ICO (Instituto de Crédito Oficial), specifically for the line of support to companies and entrepreneurs, as we believe that they best suit our needs and we can make a choice between different entities that manage this type of credits. They are granted by the ICO through different banks. The banks will determine whether or not they grant the loan, in addition to assuming the risk of a possible default.

As expressed by the ICO, this type of financing is aimed at companies, private and public entities as well as self-employed workers, provided they make profitable investments in Spain and/or require liquid money.

The different conditions attached to these loans are as follows:

- Fundable concepts:
 - Investments within the national territory.
 - Liquidity.

- Maximum amount per customer: up to 12.5 million euros, both in a single transaction and in several transactions.
- Modality: Liquidity loan and loan/leasing for investment.
- Interest rate: fixed or variable, plus the margin established by the Credit Institution according to the repayment term.
- Repayment term and grace period:
 - For investment financing: 1,2,3,4,5,6,7,8,9,10,12,15 and 20 years with a grace period of up to 2 years.
 - To finance 100% liquidity: 1,2,3 and 4 years with the possibility of a 1 year grace period.
- Guarantees: These are determined by the credit institution with which the transaction is carried out, except for SGR/SAECA's guarantee.
- Commissions: The Credit Institution may charge a single commission at the start of the transaction, in addition to early repayment commission, if applicable.
- Validity: Until December 15, 2017, it will be possible to formalize loans received under the conditions of this Line.

It should be explained that the ICO establishes a maximum APR (Annual Equivalent Rate) for each period, which the credit institution with which we have the loan can never exceed. The APR already includes all the additional costs involved in carrying out the transaction, together with the nominal interest rate. To calculate our loan, we have used the maximum APR applied by the ICO at 4 years, without any grace period. We have made this choice because the results obtained will provide us with the maximum cost of our operation. As we contact the different entities, these data will vary, and we will additionally obtain other relevant data, such as commissions or opening costs. Normally, the interest applied in the valuation of loans is the Nominal Interest Rate, but in our case we only have the APR, which is equal to the APR when there are no fees or other types of expenses; for all this, we have used the APR.

For our operation, we will use the 4-year fixed interest rate APR provided by the ICO, without a grace period, which is 4.348%. Due to the investment in fixed assets of € 36,266, it is advisable to ask for a loan of € 40,000 in order to meet this cost and to have a small amount for unforeseen expenses. The way of estimating it is through the French method, as we can see in table 7, which is the most widely used by banks.

Table 7: ICO Loan.

YEAR	ANNUAL PERCENTAGE RATE (APR)	INSTALMENT	AMORTISATION	OUTSTANDING CAPITAL
0				40.000,00 €
1	1.739,20 €	11.110,12 €	9.370,92 €	30.629,08 €
2	1.331,75 €	11.110,12 €	9.778,37 €	20.850,71 €
3	906,59 €	11.110,12 €	10.203,53 €	10.647,18 €
4	462,94 €	11.110,12 €	10.647,18 €	- 0,00

Source: Own elaboration (2017).

Furthermore, it is important to explain that the payment of the vehicles will be made thanks to this loan, since our company discards the option of leasing and renting, due to the preference of owning them from the first day.

7.3 INCOME STATEMENT FORECAST

In this section, we will explain income statement of our company. In order to do this, we have taken into account all the possible data considered for the start of our activity, in order to carry out an analysis of our possible profit and losses over a period of 4 years.

Table 8: INCOME STATEMENT. ESTIMATE YEAR 1,2,3 AND 4.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4
1. Revenue	107.700,00 €	113.085,00 €	118.739,25 €	124.676,21 €
Services rendered	107.700,00 €	113.085,00 €	118.739,25 €	124.676,21 €
2. Changes in inventories of finished goods and work in progress	-	-	-	-
3. Work carried out by the company for assets	-	-	-	-
4. Supplies	- 1.000,00 €	- 1.000,00 €	- 1.000,00 €	- 1.000,00 €
Subcontracted work	- 1.000,00 €	- 1.000,00 €	- 1.000,00 €	- 1.000,00 €
5. Other operating income	-	-	-	-
6. Personnel expenses	- 44.496,00 €	- 44.496,00 €	- 44.496,00 €	- 44.496,00 €
Salaries	- 36.000,00 €	- 36.000,00 €	- 36.000,00 €	- 36.000,00 €
Social Security	- 8.496,00 €	- 8.496,00 €	- 8.496,00 €	- 8.496,00 €
7. Other operating expenses	- 47.100,00 €	- 43.884,00 €	- 45.809,52 €	- 46.581,31 €
External services	- 47.100,00 €	- 43.884,00 €	- 45.809,52 €	- 46.581,31 €
8. Amortisation and depreciation	- 6.624,00 €	- 6.624,00 €	- 6.624,00 €	- 5.024,00 €
9. Non-financial and other capital grants	-	-	-	-
10. Provision surpluses	-	-	-	-
11. Impairment and gains/(losses) on disposal of fixed assets	-	-	-	-
A) RESULTS FROM OPERATING ACTIVITIES (1+2+3+4+5+6+7+8+9+10+11)	8.480,00 €	17.081,00 €	20.809,73 €	27.574,91 €
12. Finance income	-	-	-	-
13. Finance expenses	- 1.739,20 €	- 1.331,75 €	- 906,59 €	- 462,94 €
On debts to third parties	- 1.739,20 €	- 1.331,75 €	- 906,59 €	- 462,94 €
14. Change in fair value of financial instruments	-	-	-	-
15. Exchange gains/(losses)	-	-	-	-
16. Impairment and gains/(losses) on disposal of financial instruments	-	-	-	-
B) NET FINANCE INCOME/(EXPENSE) (12+13+14+15+16)	- 1.739,20 €	- 1.331,75 €	- 906,59 €	- 462,94 €
C) PROFIT/(LOSS) BEFORE INCOME TAX (A+B)	6.740,80 €	15.749,25 €	19.903,14 €	27.111,97 €
17. Income tax expense	- 1.011,12 €	- 2.362,39 €	- 2.985,47 €	- 4.066,80 €
D) PROFIT/(LOSS) FOR THE PERIOD (C+17)	5.729,68 €	13.386,86 €	16.917,67 €	23.045,17 €

Source: Own elaboration (2017).

Table 9: Other operating expenses. Breakdown.

OTHER OPERATING EXPENSES	YEAR 1	YEAR 2	YEAR 3	YEAR 4
Local rental	- 6.000,00 €	- 6.000,00 €	- 6.000,00 €	- 6.000,00 €
Tax advice	- 1.200,00 €	- 1.200,00 €	- 1.200,00 €	- 1.200,00 €
Formation expenses (notary, registration in different registers, licenses, etc)	- 1.300,00 €	-	-	-
Supplies (water, electricity, gas)	- 1.200,00 €	- 1.100,00 €	- 1.350,00 €	- 1.270,00 €
Internet + 2 mobile lines	- 700,00 €	- 700,00 €	- 700,00 €	- 700,00 €
Insurance (civil liability, workers, vehicles)	- 3.300,00 €	- 3.300,00 €	- 3.300,00 €	- 3.300,00 €
Advertising	- 1.000,00 €	- 400,00 €	- 200,00 €	- 150,00 €
Independent professional services (Collegiate subcontracting)	- 30.400,00 €	- 29.184,00 €	- 30.059,52 €	- 30.961,31 €
Other expenses (fuel)	- 2.000,00 €	- 2.000,00 €	- 3.000,00 €	- 3.000,00 €
TOTAL	- 47.100,00 €	- 43.884,00 €	- 45.809,52 €	- 46.581,31 €

Source: Own elaboration (2017).

Table 10: Amortisation. Breakdown.

AMORTISATION	PURCHASE PRICE	% MAXIMUM ANNUAL	MAXIMUM PERIOD OF YEARS	APPLIED AMORTISATION
Computer software	5.000,00 €	33%	6 YEARS	1.650,00 €
Information technology equipment (computers)	1.916,00 €	25%	8 YEARS	479,00 €
Electronic equipment (Dust meter)	2.400,00 €	20%	10 YEARS	480,00 €
Motor vehicles	22.000,00 €	16%	14 YEARS	3.520,00 €
Furniture and other property, plant and equipment	4.950,00 €	10%	10 YEARS	495,00 €
TOTAL ANNUAL DEPRECIATION				6.624,00

Source: Own elaboration (2017).

We can see in table 8 that the annual increase in turnover is 5% year-on-year, as explained above. With regard to supplies, it should be noted that such work carried out by other companies refers to outsourcing of services to laboratories to carry out different types of measurements and analyses, which we cannot carry out because we do not have the necessary equipment. The next expenditure we can observe is personnel expenditure, which includes the salaries of the two working partners together with their payment to the Social Security; this expenditure remains constant during the first four years because we do not estimate an increase in the number of staff.

Referring to the item of other operating expenses, if we look at Table 9, we can understand the breakdown of these expenses. It is therefore important to clarify that the heading of independent professional services refers to the subcontracting of other professionals such as a topographer, a geologist or a forester, for the correct development of our activity. Next, we find the total amortisation of fixed assets, where we can observe that in year 4 it is reduced. This is due to the total amortisation of computer software that year. In order to make the different amortisations, we have

used the maximum percentage established in Law 27/2014, of 27 November, on Income Tax. You can see the total amortisation in detail in table 10.

Continuing with the analysis, after obtaining the operating results of the different years, we detail the financial expenses, referring to the interest generated by external financing; we can see how they decrease year after year. Finally, the income tax that we have applied is 15%, due to our youth as a company and a tax base of less than €300,000, as expressed in Royal Decree Law 4/2013. To conclude, it should be noted that the estimate of the first year of activity concludes with a positive result for the year, which is increased in subsequent years.

7.4 BALANCE SHEET FORECAST

Once the foregoing analysis of the Income Statement has been carried out, the balance sheet is studied, showing all the assets and liabilities with which the company can start its activity. It should be noted that the data provided in this balance sheet have already been calculated in order to assess the preceding points.

Table 11: ASSETS. Year 1,2,3 and 4.

ASSETS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
A) NON-CURRENT ASSETS	29.642,00 €	29.642,00 €	29.642,00 €	31.242,00 €
I. Intangible assets	3.350,00 €	3.350,00 €	3.350,00 €	4.950,00 €
Software applications	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €
Amortisation software applications	- 1.650,00 €	- 1.650,00 €	- 1.650,00 €	- 50,00 €
II. Property, plant and equipment	26.292,00 €	26.292,00 €	26.292,00 €	26.292,00 €
Information processing equipment, electronic equipment, transport ele	31.266,00 €	31.266,00 €	31.266,00 €	31.266,00 €
Amortisation information processing equipment, electronic equipment	- 4.974,00 €	- 4.974,00 €	- 4.974,00 €	- 4.974,00 €
III. Investment property	-	-	-	-
IV. Non-current investments in group companies and associates	-	-	-	-
V. Non-current investments	-	-	-	-
VI. Deferred tax assets	-	-	-	-
B) CURRENT ASSETS	19.087,68	17.373,94 €	11.126,38 €	5.450,35 €
I. Inventories	-	-	-	-
II. Trade and other receivables	9.888,61 €	5.929,58 €	5.130,55 €	1.158,07 €
Trade receivables	9.888,61 €	5.929,58 €	5.130,55 €	1.158,07 €
III. Current investments in group companies and associates	-	-	-	-
IV. Current financial investments	-	-	-	-
V. Prepayments for current assets	-	-	-	-
VI. Cash and cash equivalents	9.199,07 €	11.444,36 €	5.995,83 €	4.292,28 €
Banks	9.199,07 €	11.444,36 €	5.995,83 €	4.292,28 €
TOTAL ASSETS	48.729,68 €	47.015,94 €	40.768,38 €	36.692,35 €

Source: Own elaboration (2017).

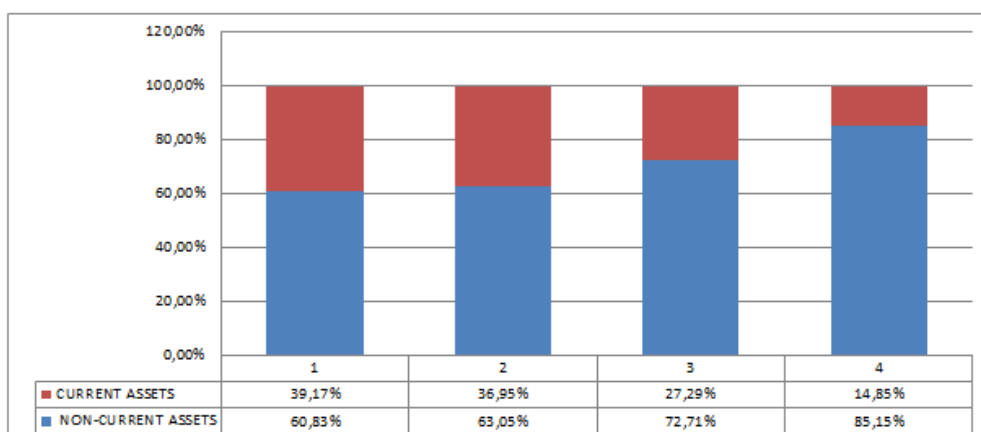
Table 12: EQUITY AND LIABILITIES. Year 1,2,3 and 4.

EQUITY AND LIABILITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4
A) EQUITY	8.729,68 €	16.386,86 €	19.917,67 €	26.045,17 €
A-1) Capital and reserves without valuation adjustments	8.729,68 €	16.386,86 €	19.917,67 €	26.045,17 €
I. Capital.	3.000,00 €	3.000,00 €	3.000,00 €	3.000,00 €
1. Registered capital	3.000,00 €	3.000,00 €	3.000,00 €	3.000,00 €
II. Share premium	-	-	-	-
III. Reserves.	-	-	-	-
IV. (Own shares and equity holdings)	-	-	-	-
V. Prior periods' profit and loss	-	-	-	-
VI. Other equity holder contributions	-	-	-	-
VII. Profit/(loss) for the period	5.729,68 €	13.386,86 €	16.917,67 €	23.045,17 €
VIII. (Interim dividend)	-	-	-	-
A-2) Grants, donations and bequests received	-	-	-	-
B) NON-CURRENT LIABILITIES	30.629,08 €	20.850,71 €	10.647,18 €	- 0,00 €
I. Non-current provisions	-	-	-	-
II Non-current payables	30.629,08 €	20.850,71 €	10.647,18 €	- 0,00 €
1. Debt with financial institutions	30.629,08 €	20.850,71 €	10.647,18 €	- 0,00 €
III. Group companies and associates, non-current	-	-	-	-
IV. Deferred tax liabilities	-	-	-	-
V. Non-current accruals	-	-	-	-
C) CURRENT LIABILITIES	9.370,92 €	9.778,37 €	10.203,53 €	10.647,18 €
I. Current provisions	-	-	-	-
II. Current payables	9.370,92 €	9.778,37 €	10.203,53 €	10.647,18 €
1. Debt with financial institutions	9.370,92 €	9.778,37 €	10.203,53 €	10.647,18 €
III. Current debts with group and associated companies	-	-	-	-
IV. Trade and other payables	-	-	-	-
V. Current accruals	-	-	-	-
TOTAL EQUITY AND LIABILITIES	48.729,68 €	47.015,94 €	40.768,38 €	36.692,35 €

Sorce: Own elaboration (2017).

As we can see in table 11, our non-current assets (NCA) include all the fixed assets in which we have invested in order to carry out our task. It is worth remembering that these fixed assets are software, computers, furniture, office equipment, vehicles and a dust metre. In the current assets, we find commercial debtors. This is because our clients owe us a part of the services provided. The explanation is simple: we offer services that can be small or large; in the large ones, a percentage of the budget will be charged initially, and the rest once the job is finished. On the other hand, the bank account reflects the money we have in the bank.

Illustration 14: Analysis of the asset structure. Year 1,2,3 and 4.

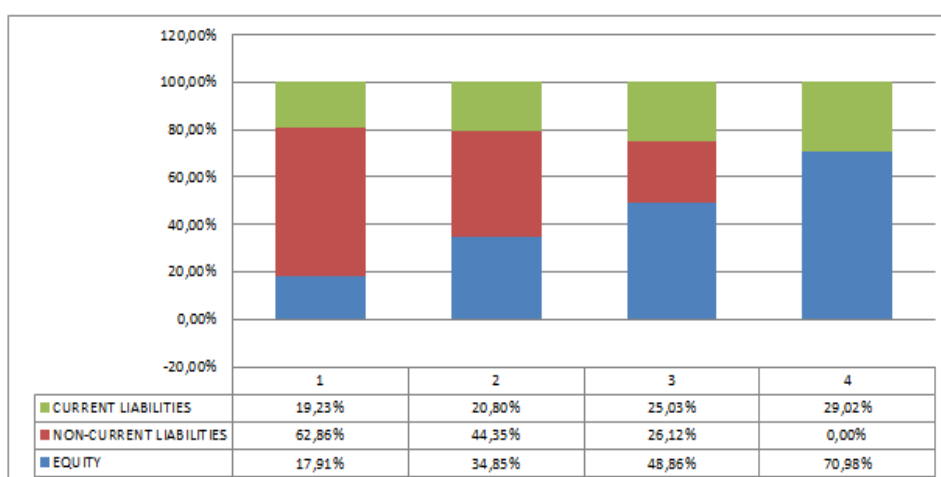


Sorce: Own elaboration (2017).

In addition, the percentage of current assets (CA) and non-current assets (NCA) as a percentage of total assets has been calculated to complement the analysis. The first thing we notice is that the NCA is greater in all four exercises. The difference increases year after year, up to 85.15% in year 4. The non-current asset is made up of the different investments that we have made, that is the reason for such a high percentage. The increase in NCA in the fourth year is mainly due to the total amortisation of software computer, when we amortise only 50 euros. On the other hand, the CA is basically composed of the commercial debts of clients and our money in banks, since we do not have any kind of inventories due to the work we do.

As for the equity in table 12 and illustration 15, it can be seen that it shows a positive evolution as the years go by. This is because of the consecutive annual increase in profit for the year, which is reflected within the equity. Non-current liabilities (NCL) show our long-term debts to the bank. It presents an opposite trend to that of the equity; it decreases as the years go by before disappearing due to the extinction of debt for external financing. Current liabilities (CL) are short-term debt, which has increased in the CL in recent years as a consequence of the loan, which ends the fourth year.

Illustration 15: Analysis of the structure of liabilities and equity. Year 1,2,3 and 4.



Source: Own elaboration (2017).

7.5 INVESTMENT ANALYSIS

In this section, we will analyze the investment of the project, which has been made to perform our activity. To do this, it is necessary to know the total of possible receivables and payments of the company, and thus obtain the cash flow that we estimate annually. After obtaining them, we will be able to proceed with their analysis.

Table 13: CASH FLOW. Year 1,2,3 and 4.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4
Loan	40.000,00 €	-	-	-
Revenue	107.700,00 €	113.085,00 €	118.739,25 €	124.676,21 €
TOTAL RECEIVABLES	147.700,00 €	113.085,00 €	118.739,25 €	124.676,21 €
Formation expenses	1.300,00 €	-	-	-
Local rental	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €
Tax advice	1.200,00 €	1.200,00 €	1.200,00 €	1.200,00 €
Supplies (water, electricity, gas)	1.200,00 €	1.100,00 €	1.350,00 €	1.270,00 €
Internet + 2 mobile lines	700,00 €	700,00 €	700,00 €	700,00 €
Insurance (civil liability, workers, vehicles)	3.300,00 €	3.300,00 €	3.300,00 €	3.300,00 €
Advertising	1.000,00 €	400,00 €	200,00 €	150,00 €
Other expenses (fuel)	2.000,00 €	2.000,00 €	3.000,00 €	3.000,00 €
Subcontracted work (laboratory)	1.000,00 €	1.000,00 €	1.000,00 €	1.000,00 €
Independent professional services (Collegiate subcontracting)	30.400,00 €	29.184,00 €	30.059,52 €	30.961,31 €
Salaries	36.000,00 €	36.000,00 €	36.000,00 €	36.000,00 €
Social Security	8.496,00 €	8.496,00 €	8.496,00 €	8.496,00 €
Interests loan	1.739,20 €	1.331,75 €	906,59 €	462,94 €
Income Tax	1.011,12 €	2.362,39 €	2.985,47 €	4.066,80 €
TOTAL PAYMENTS	95.346,32 €	93.074,14 €	95.197,58 €	96.607,04 €
CASH FLOW	52.353,68 €	20.010,86 €	23.541,67 €	28.069,17 €

Source: Own elaboration (2017).

As it can be seen in Table 13, annual cash flows have been obtained. The total receivables for the first year include income by activity and the loan that we would request in order to make our fixed assets investment. This is why the cash flow for year 1 are therefore much higher than in subsequent years. In addition, we can see that once charges have been normalized from year 2 onwards, there is a progressive increase over the years. It is because of the increase in income from services offered and the reduction of some of the payments. Once the most relevant concepts have been clarified, we will analyze the investment of the project.

Table 14: NPV and IRR of the project.

NPV	11.691,47 €	> 0	FEASIBLE
IRR	13,1081%	TIR > K	FEASIBLE

Source: Own elaboration (2017).

In order to calculate the NPV (Net Present Value) and IRR (Internal Rate of Return), the cash flows for the estimated years 1,2,3 and 4 have been used, and the total payments for year 1 have been used as an initial disbursement. In addition, to carry out this operation, an interest rate of 7% was considered to be required for the investment (K).

The NPV shows a value of €11,691.47, which means that the net present value of the investment at this time is that figure. As you can see, this figure is positive, so if our NPV is greater than zero, the investment will be viable. We can therefore say that our project investment is fully viable. The IRR, on the other hand, offers us the discount rate (k) that makes the NPV 0, i. e. the discount rate so that the investment is at a turning point. It means that our investment will not generate either profits or losses. In this case, the IRR obtained is 13.1081%, higher than our estimate of the interest required for the investment (7%); this means that the investment made is viable. Therefore, to conclude this section, we can affirm that it is feasible to carry out our project investment.

Table 15: NPV and IRR with inflation.

INFLATION	6,00%
NPV	186,72 €
IRR	13,1081%

Sorce: Own elaboration (2017).

Under the assumption of inflation, our data would vary. That is why we wanted to reflect this situation. For this purpose, we consider an inflation rate of 6%, the maximum value with which we would continue obtaining a viable investment. The NPV obtained is 186.72 €, which remains positive, together with a IRR equal to the one calculated above, therefore a feasible investment is obtained in the same way. If inflation will be 7%, this project would no longer be feasible.

7.6 ANALYSIS OF RATIOS

To conclude the financial analysis, different ratios have been calculated in order to analyze in a more detailed way the Balance Sheet and Income Statement, and thus the situation of the company.

Table 16: ROE AND ROA. Year 1,2,3 and 4.

		YEAR 1	YEAR 2	YEAR 3	YEAR 4
ROE	PERIOD PROFIT/EQUITY	66%	0,82	0,85	0,88
ROA	BEFORE INCOME TAX PROFIT/ASSETS	0,14	0,33	0,49	0,74

Sorce: Own elaboration (2017).

Table 17: Working Capital. Year 1,2,3 and 4.

		YEAR 1	YEAR 2	YEAR 3	YEAR 4
WORKING CAPITAL	CA-CL	9.716,76 €	7.595,57 €	922,85 €	-5.196,83 €

Sorce: Own elaboration (2017).

The first calculations made refer to ROE (Return on Equity) (financial return) and ROA (Return on Assets) (economic return). The economic profitability (ROA) explains the relationship between the profits obtained and the total assets required to carry out the activity. Its interpretation implies that the higher the calculated value, the greater its profitability. In our case, the values obtained are increased as years go by, until finally obtaining a value of 0.88 in the fourth year, which is quite beneficial. ROE, on the other hand, also shows positive results due to its progressive increase, positioning itself at 0.74 in the fourth year.

Another of the calculations necessary for this analysis is the Working Capital, whose results represent the liquidity situation in the company. In this case, we obtain positive values in year 1,2 and 3, with the exception of year 4. This situation is due to the shortage of sufficient liquid assets.

Table 18: LIQUIDITY, AVAILABILITY, DEBT, AND CAPITAL ADEQUACY. Year 1,2,3 and 4.

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	INDICATORS
LIQUIDITY	CA/CL	2,04	1,78	1,09	0,51	1,5 - 2
AVAILABILITY	CASH/PC	0,98	1,17	0,59	0,40	0,2 - 0,3
DEBT	LIABILITIES/EQUITY	4,58	1,87	1,05	0,41	0,4 - 0,6
CAPITAL ADEQUACY	ASSETS/LIABILITIES	1,22	1,54	1,96	3,45	>1

Source: Own elaboration (2017).

Table 19: SALES MARGIN AND ASSET TURNOVER. Year 1,2,3 and 4.

		YEAR 1	YEAR 2	YEAR 3	YEAR 4
SALES MARGIN	BEFORE INCOME TAX PROFIT/REVENUE	0,06	0,14	0,17	0,22
ASSET TURNOVER	REVENUE/ASSETS	2,21	2,41	2,91	3,40

Source: Own elaboration (2017).

Completing the calculation previously made, to visualize the liquidity status of the company, other calculations are made. The liquidity ratio calculates the CA over the CL, indicating whether the company will be able to meet its short-term payments. Looking at table 18, the values obtained in years 1,2 and 3 are close to or within the indicators, however, the fourth year is below them, which ratifies the data obtained in the Working Capital. Availability, on the other hand, calculates the amount of money available to the company to meet its short-term debts. The data obtained are higher than the indicators, although the last two years are very close.

Debt is another of the calculations carried out, so the data obtained for the company show a high indebtedness in the first year, which decreases to be within the reference values in the fourth year. Another important ratio is capital adequacy, which presents positive values for the company due to the fact that it is increasing as the years go by.

Finally, it can be seen in table 19 that the margin on sales held by the company increases over the years, reaching 0.22 in year 4. In addition, asset turnover shows the company's ability to achieve profitability of its assets. In this case, a progressive increase is shown, which means that our company is perfectly capable of it.

7. CONCLUSIONS

After the period of crisis, Spain is in a process of economic recovery, slow but solid. This recovery can be seen in the different economic indicators, which show clear signs of improvement. One of the incentives to carry out this project is the increase in business creation in the Comunidad Valenciana, as well as the notable increase in business confidence indicators, which is encouraging for the creation of new businesses.

Current mining and environmental legislation is very strict and inflexible. For this reason, all activities that have an impact on the environment, regardless of the effect in question, must apply this legislation. As a result, extractive activities of natural resources are implicated in this legislative compliance, due to their great impact on the environment. In order to carry out this compliance, it is necessary for these activities to be supported by professionals specialized in the field, who have complete knowledge of the different laws to be applied throughout the extraction process.

It is evident, after carrying out its corresponding study, that there is a large number of mining operations in the provinces of Castellón and Valencia that are currently active, as well as a large number of unrestored mining holes, most of which are abandoned. This abandonment, and therefore the absence of corrective measures to rehabilitate and restore the affected land, is due to the lack of a mandatory law in previous decades. Given this large number of mining operations, the number of consultancies or professional offices in Castellón and Valencia is small. Therefore, faced with such a situation, it has been considered a business opportunity, and together with it the development of a technical-mining and environmental consultancy.

For the correct rendering of our services, it is essential to subcontract certain tasks, both to different qualified professionals and to companies where they have a wide range of laboratory equipment. The reason for this lies in the great scale and complexity of the tasks to be carried out in terms of the effective restoration of the mining holes. All this, in order to be able to carry out the necessary reports at a later date, which must show the correct application of the legislation in force regarding the activities carried out in the mining operation.

The process of rendering the services will vary depending on their characteristics and the requirements of each client. In order to do this, in addition to the relevant subcontracting, it will be necessary to use different software and computer applications, which are essential for the completion of a correct and complete job. A Quality

Management System will be implemented in order to reduce costs, prevent risks, optimize resources and thus be able to offer high quality services. In addition, for the marketing of the same, actions will be made by the entrepreneurs themselves, without the need to hire advertising agencies.

In order to carry out the project, it is necessary to invest in fixed assets, since without them the activity cannot be carried out. This investment will be covered by external financing, which after evaluating it, the most convenient thing is to obtain an ICO loan (Official Credit Institute). The results obtained after the economic-financial analysis are quite optimistic. The 4-year forecast profit and loss account shows us positive data from the first year. The conclusions drawn from the investment analysis are favourable, as the data obtained suggest that the investment to be made is viable. In addition, the analysis of ratios also presents quite positive data in terms of profitability, solvency and indebtedness, which decreases as the years go by. Despite all these facts, we are faced with the difficulty of insufficient money available, which we believe will be solved as the business grows.

Therefore, after all the data and conclusions gathered from the preparation of this work, it is concluded that the business project is viable, so entrepreneurs can carry out the business, believing that this will be a project with a view to good development and positive evolution.

9.BIBLIOGRAPHY

- El Mundo (2017). *La UE confirma que España cumplió su objetivo de déficit en el año 2016*. Economía. Macroeconomía. [online] Available at: <http://www.elmundo.es/economia/macroeconomia/2017/04/24/58fdced22601d26308b45ce.html>. [Accesed 13 September 2017].
- Emprendedores. *Trámites para crear una Sociedad Limitada (SL)*. Crea tu empresa. [online] Available at: < <http://www.emprendedores.es/crear-una-empresa/tramites-crear-sociedad-limitada-sl> > [Accesed 10 September 2017].
- España: Ley 22/1973, de 21 de Julio, de Minas (B.O.E., núm. 176 de 24 de julio de 1973).
- España: Real Decreto 2857/1978, de 25 de agosto, por el que se aprueba el Reglamento General para el Regimen de la Minería (B.O.E., núms 295 y 296, de 11 y 12 de diciembre de 1978).
- España: Real Decreto 863/1985, de 2 de abril, por el que se aprueba el Reglamento General de Normas Básicas de Seguridad Minera (B.O.E., núm 140, de 12 de Junio de 1985).
- España: Orden del Ministerio de Industria de 22 de Marzo de 188, por la que se aprueban Instrucciones Técnicas Complementarias del Reglamento General de Normas Básicas de Seguridad Minera. ITC 02.0.01 DIRECCIONES FACULTATIVAS (B.O.E., núm 85, de 8 de abril de 1988).
- España: Decreto 23/2013, de 25 de enero, del Consell, por el que se establecen medidas para agilización y simplificación administrativa de procedimientos en materia de minería (Diario Oficial de la Comunitat Valenciana, núm. 695, de 30 de Enero de 2013).
- España: Real Decreto 2994/1982, de 15 de octubre, sobre Restauración de Espacio Natural afectado por actividades mineras (B.O.E., núm 274 de 15 de noviembre de 1982).

- España: Orden de 20 de noviembre de 1984, por la que se desarrolla el Real Decreto 2994/1982, de 15 de octubre, sobre restauración de espacio natural afectado por actividades mineras (B.O.E., núm 285, de 28 de noviembre de 1984).
- España: Real Decreto 975/2009, de 12 de julio, sobre Gestión de los residuos de las industrias extractivas y de protección y rehabilitación del espacio afectado por actividades mineras (B.O.E., núm143 de 13 de junio de 2009).
- España: Decreto 200/2004, de 1 de octubre, del Consell de la Generalitat, por el que se regula la utilización de residuos inertes adecuados en obras de restauración, acondicionamiento y relleno, o con fines de construcción (Diario Oficial de la Generalitat Valenciana, núm 4860 de 11 de octubre de 2004).
- España: Ley 21/2013 de 9 de Diciembre, de Impacto Ambiental (B.O.E., núm 296 de 11 de diciembre de 2013).
- España: Ley 6/2014, de 25 de julio, de Prevención, Calidad y Control Ambiental de actividades en la Comunitat Valenciana, núm 7329,, de 31 de Julio de 2014.
- España: Ley de Prevención de Riesgos Laborales. Ley 31/1995, de 8 de noviembre de 1995. (BOE numero 269, de 10 de noviembre de 1995).
- España: Real Decreto 1389/1997, de 5 de septiembre, por el que se aprueban las disposiciones mínimas destinada a proteger la seguridad y la salud de los trabajadores en las actividades mineras. (B.O.E numero 240, de 7 de octubre de 1997).
- España: Real Decreto-ley 4/2013, de 22 de febrero, de medidas de apoyo al emprendedor y de estímulo del crecimiento y de la creación de empleo (B.O.E núm. 47, de 23 de febrero de 2013).
- España: Ley 27/2014, de 27 de noviembre, del Impuesto sobre Sociedades (B.O.E núm. 288, de 28 de noviembre de 2014).
- España: Real Decreto Legislativo 1/2010, de 2 de julio, por el que se aprueba el texto refundido de la Ley de Sociedades de Capital. (B.O.E. núm. 161, de 3 de julio de 2010)

- Iborra, M., Dasí, A., Dolz, C. y Ferrer, C. (2011). *Fundamentos de dirección de empresas*. Madrid: Paraninfo.
- ICO. [online] Available at: < <https://www.ico.es/web/ico/lineas-ico> >. [Accessed 1 October 2017].
- INE. [online] Available at: < <http://www.ine.es/>>. [Accessed 13 September 2017].
- INE (2015). *Encuesta de Inserción Laboral de Titulados Universitarios 2014. Avance de Resultados*. [online] Available at: <<http://www.ine.es/prensa/np957.pdf>> [Accessed 14 September 2017].
- INE (2017). *Producto Interior Bruto regional. Año 2016*. [online] Available at: <http://www.ine.es/prensa/cre_2016_1.pdf>. [Accessed 13 September 2017].
- INE (2017). *Cifras de Población a 1 de enero de 2017. Estadística de Migraciones 2016*. [online] Available at: < http://www.ine.es/prensa/cp_2017_p.pdf >. [Accessed 13 September 2017].
- MINISTERIO DE EDUCACIÓN, CULTURA Y DEPORTE (2015). *Estadística del Gasto público en educación*. [online] Available at: <<https://www.mecd.gob.es/dms/mecd/servicios-al-ciudadano-mecd/estadisticas/educacion/recursos-economicos/gasto-publico/2015/2015NotaRes.pdf>> [Accessed 14 September 2017].
- Ministerio de Energía, Turismo y Agenda Digital. *Catastro Minero*. [online] Available at: <<https://geoportal.minetur.gob.es/CatastroMinero/BusquedaBasica.do>> [Accessed 8 August 2017].
- Ministerio de Empleo y Seguridad Social. *Bases y tipos de cotización 2017. Trabajadores*. [online] Available at: <http://www.seg-social.es/Internet_1/Trabajadores/CotizacionRecaudaci10777/Basesytiposdeco tiza36537/index.htm> [Accessed 10 September 2017].
- Miranda Oliván, A. T. (2004). *Cómo elaborar un plan de empresa*. Madrid: Thomson.

- Las Heras, G. (2017). *Diez métodos de financiación para pymes más allá de los bancos.* eldiario.es [online] Available at: <http://www.eldiario.es/economia/financiacion-pymes_0_668433510.html> [Accessed 10 September 2017].
- OECD (2016). *¿Cómo va la vida en España?*. OECD Better Life Initiative. [online] Available at: < <https://www.oecd.org/statistics/Better-Life-Initiative-country-note-Spain-in-Espagnol.pdf>.> [Accessed 13 September 2017].
- OECD (2017). *Estudios económicos de la OCDE: España. Visión General.* OECD, Mejores políticas para una vida mejor. [online] Available at: < <https://www.oecd.org/eco/surveys/Spain-2017-OECD-economic-survey-overview-spanish.pdf>.> [Accessed 13 September 2017].