

INSTITUTO UNIVERSITÁRIO DE LISBOA

Acoustica's International Expansion: The French Market

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Master in International Management

Supervisor:

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November, 2020



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I would like to thank everyone who contributed directly or indirectly to the preparation of this report. I am thinking in particular of Mr. Renato Pereira (thesis mentor) as well as Mr. Philippe Doneux (CEO and founder of Acoustica) without whom this work would not have been possible.

# Summary

Este projeto consiste em um estudo de mercado. Tem por objetivo identificar se o país selecionado será receptivo a uma oferta estrangeira de isolamento acústico.

A seção de abertura será dedicada a descobrir como a **França é afetada** pelo ruído. Dados gerais comprovarão a gravidade do problema em diferentes ambientes. O impacto global na saúde da população francesa, em seu local de trabalho e nos transportes.

A seção seguinte fará **uma análise aprofundada** dos aspectos internos da empresa. Assim, dando um amplo espectro de sua situação atual de negócios e sua capacidade de assumir tal projeto. O sucesso na mesma seção será uma observação do mercado. Permitindo a identificação do potencial de mercado da França e destacando a concorrência local.

Posteriormente, estará o **plano de desenvolvimento prático**, consistindo em diferentes cenários de exportação, bem como os principais contatos para apresentar o projeto.

Em última análise, serão as recomendações e cinco forças porter. Essas duas seções fornecerão um **aspecto conclusivo** do projeto e ajudarão a resumir se a empresa recebe sinal verde ou vermelho para sua exportação.

This project consists of a market study. It holds as aim to identify if the selected country will be receptive to a foreign sound insulation offer.

The opening section will be dedicated to discovering how badly **France is affected** by noise. General data will prove the seriousness of the issue in different environments. The global impact on the French population' health, at their workspace and in transport.

The following section will be an **in-depth analysis** of the internal aspects of the company. Thus, giving a wide spectre of their current business situation and their ability to take on such a project. Succeeding in the same section will be a market observation. Enabling the identification of France's market potential and highlighting the local competition.

Afterward will be the **practical development plan**, consisting of different export scenarios as well as key contacts to put forward the project.

Ultimately, will be the recommendations and porter five forces. These two sections will provide a **conclusive aspect** to the project and help summarise if the company receives a green or red light for their exportation.

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# **Executive Summary**

As mentioned, the idea behind this project is to identify if and how Acoustica can develop its offer in France. In order to do so, specific sections had to be studied and developed. In the objective to answer the questions how, what and where the company could conduct business to gain the trust of French national clients. Hereunder is the skeleton of thesis with some main ideas.

- 1. Literature review on the issue:
  - a. Noise as low as 55dB can have negative effects on human health. To show what this represents, a normal conversation or background noise is set to be around 60 dB.
  - b. The National Noise Council has estimated the noise pollution expenditure to be EUR 57 billion in 2016, or in other words, 2% of the French GDP.
  - c. The institute of opinion and marketing made a study to analyse the effects of noise pollution at work. The results showed worrying outcomes on productivity, aggressivity and conflicts.
- 2. Analysis of the information
  - a. Internal analysis:
    - i. Company ID
    - ii. Marketing Mix
    - iii. Value Chain Analysis
    - iv. Export Diagnostic: Green Light
    - v. STP
    - vi. Business Canvas
  - b. Market analysis
    - i. Market potential:
      - 1. Commercial observation

France holds a comfortable situation concerning its commercial attractiveness. Trade openness is high as the country's import is at a high figure.

2. Residential Housing

The construction sector in the country is developing at a significant rate. As a matter of fact, France is the biggest housing constructer per habitant in all of Europe. This section of the thesis contains a graph that holds as title "Number of households built per 1000 individuals." It indicates that over 6 housing models are built. 3. Non-residential development

In only one year (2018-2019), 41.6 million sqm<sup>1</sup> of non-residential projects received construction permits in France. This represents a yearly growth of 4.3% compared to 2018. In other words, 1 323 200 sqm were authorised for the construction of hotels, 5 801 500 sqm for offices and 6 209 100 sqm for the public sector.

4. Industrial sector

It is interesting to identify what lies ahead for the industrial sector in this country. The future is set to be promising with development plans that have already been started. The 34 sector-based initiatives are a key emphasis of this. This 10-year government-backed plan (2014-2024) has been launched to develop the industrial environment on many levels. According to McKensey, this plan to develop manufacturing represents the creation of 480 000 additional jobs in the 10-year period as well as an extra capital of EUR 45 billion.

5. Transportation sector

This section of the project shows significant growth in railway, road and airborne transportation. Such examples to prove this is the creation of future terminals at major airports or even new large motorway projects being held in the country.

- ii. Legal framework
  - 1. New laws are being implemented on the national and European level to tackle noise pollution thus showing a reassuring aspect for the development of Acoustica.
  - 2. There are limited yet attractive incentives that Acoustica could benefit from. An example of this is the EMDG<sup>2</sup>. The Export Market Development Grant is giving by the Australian government to national companies willing to develop their offer overseas.
- c. Competitors analysis

6 French national competitors have been highlighted. An in detailed observation is in the project. Two of the six have been classified **as** "dangerous" due to their offer similarity with Acoustica.

<sup>&</sup>lt;sup>1</sup> <u>https://www.statistiques.developpement-durable.gouv.fr/construction-de-locaux-resultats-fin-septembre-</u> 2019-france-entiere

<sup>&</sup>lt;sup>2</sup> <u>https://www.business.gov.au/grants-and-programs/export-market-development-grants-emdg</u>

#### 1. Forms of implementation

This section represents the key insight to the project. Four business scenarios will be developed in order to identify the advantages and disadvantages they represent for Acoustica. Following this, will be a part allocated to the identification of key partnerships needed in both set-ups. The development strategy will then select which product of the company's portfolio would match the French market's needs.

#### 2. Conclusions

10 final recommendations will be available in this section. Following these points will be Porter's five forces. This will bring a conclusive aspect to the final part. In order to conclude the project, the porter 5 forces graph will be developed. This will help summarise the different pressure points that the French market holds on Acoustica's products.

## Exposition of the context of the issue

Acoustica has reached high satisfactory sales for the past few years. Through hard work and dedication, the company has positioned itself in a comfortable slot throughout Australia and in some foreign territories. Its culture has always been based upon a good "work hard or go home" way of thinking. Therefore, it is hardly suprising that a European expansion has always been in the back of the team's mind. Already possessing various European clients, the company new that the western markets would be receptive to their sound proofing expertise. The uncertainty was lying in the specifications of each market, on how to conduct business on a day to day manner and how to help protect the local population from sound pollution.

Sound pollution is a health affecting nuisance that is present in all countries. France is one of the countries with the highest record of decibel presence in Europe. According to the Amplifion study<sup>3</sup> on noise pollution that was taken in 11 countries, France came in 3<sup>rd</sup> after the USA and Italy for having the loudest noise levels. Apart from doing promising business, Acoustica's main mission is to protect individuals from this deadly threat. As a result, their first choice of European country to penetrate had to hold two criteria. It had to be large enough to be financially attractive and to struggle with noise pollution in order to require Acoustica's help.

<sup>&</sup>lt;sup>3</sup> <u>https://www.ouiemagazine.net/2015/12/10/etude-amplifon-27-des-habitants-des-grandes-villes-subissent-une-pollution-sonore-excessive/</u>

## Literature review on the issue

### 1. Effects of noise pollution on health:

According to the European commission, any noise level over 55 dB <sup>4</sup>can have negative effects on human health. To give the reader a better insight on what this is and what it represents, the next graph indicates dB levels of everyday noises.

Noise	Average decibels (dB)
Leaves rustling, soft music, whisper	30
Average home noise	40
Normal conversation, background music	60
Office noise, inside car at 60 mph	70
Vacuum cleaner, average radio	75
5	

Surprisingly, an innocent level of sound such as a conversation or music in the background can have repercussions on our well-being. Over 100 million EU citizens are affected by sounds exceeding the 55-dB level. This represents some 6 million citizens being sleep deprived. That can further be linked to 70 000 hospital admissions or even more drastically to 17 000 premature deaths per year.

The World Health Organisation has recognised the enormous impact noise pollution has on society today. Furthermore, the WHO has exposed the difficulties governments face to put in place policies and rules to reduce the issue effectively. The following are 7<sup>6</sup> points of detrimental health effects due to community<sup>7</sup> noise exposure that the WHO has classified.

**Hearing impairment**, also known as hearing loss, is a common effect of noise pollution. Although children are more vulnerable than adults, this damage is present in all age groups. It is recorded that noise over 70dB can cause a percentage of hearing loss. This hearing impairment can lead to abnormal loudness perception where normal sound hearing is reduced but uncomfortable sound is slightly elevated. On a personal and social point of view, these damages can have devastating repercussions such as depression, education performances limitations and fewer job opportunities for the individual.

**Annoyance and antisocial behaviour** can be hugely provoked by noise pollution. The WHO has listed a wide range of negative reactions such as anger, anxiety and exhaustion that can be

4

https://ec.europa.eu/environment/integration/research/newsalert/pdf/noise abatement approaches FB17 en.pdf p4

<sup>&</sup>lt;sup>5</sup> <u>https://www.healthlinkbc.ca/health-topics/tf4173</u>

<sup>&</sup>lt;sup>6</sup> <u>https://www.who.int/docstore/peh/noise/Comnoise-1.pdf</u>

<sup>&</sup>lt;sup>7</sup> Community noise (also called environmental noise, residential noise or domestic noise) is defined as noise emitted from all sources except noise at the industrial workplace. (Sentence from PDF listed previously)

linked to this nuisance. Such reactions have a harmful impact on day to day interactions and overall harmony in communities. Furthermore, links can be made with economically expensive dilemmas such as accidents or even drug addiction.

**Interference with spoken communication** is highly present especially in sensitive age groups such as children or the elderly. This communication tampering is followed by fatigue, uncertainty and lack of confidence having considerably negative effects on the individual's development.

**Sleep deprivation** is one of the most common consequences caused by a noisy environment. We as humans, are extremely sensitive to sound when sleeping as noise as low as 30dB can disrupt our sleep cycles. Such disruption has effects on physical and mental health, therefore, impacting daily performances. Mental deterioration can be so high that, according to some evidence, a person being awake for more than 19<sup>8</sup> hours can have an impaired mental capacity equal to someone who is legally drunk.

**Cardiovascular effects** are by far a major health effect matched with noise pollution. There is evidence that high blood pressure, heart attack and strokes occur more frequently in noisy areas. Dr Wolfgang Babisch, a senior research officer at the German Federal Environmental Agency stated, *"The questionat present is no longer whether noise causes cardiovascular effects, it is rather: what is the magnitude of the effect..."*. These effects can already be identified to be caused by daily noises as low as 65 dB.

**Mental illness** is an issue that affects men and women of all ages. Although it is said that noise pollution is not a direct cause, it can accelerate and develop mental disorders. Numerous studies have shown the link between this type of nuisance and mental health indicators such as wellbeing, use of drugs or sleeping pills and hospital admissions.

**Overall performances** are impacted. Physical and mental capacities are clearly altered when exposed to hazardous sounds. Important factors such as memory, problem solving, and reading are reduced highly due to noise exposure. Resulting in economic costs and physical accidents. The over whole impact that noise pollution has on our communities is there for gigantic. To add data to the situation, the WHO has estimated the number of years lost to premature death, poor health and disability directly linked to the nuisance. Shockingly, the results came up with 61 000 for heart diseases, 654 000 for annoyance and 903 000 for sleep disturbance. This data is expressed annually and reflects western Europe alone.<sup>9</sup>



<sup>&</sup>lt;sup>8</sup> <u>https://www.youtube.com/watch?v=Y-8b99rGpkM</u>

<sup>&</sup>lt;sup>9</sup> <u>https://ec.europa.eu/environment/legal/law/5/e\_learning/module\_1\_6.htm</u> Pyramid of noise effects

## 2. Noise pollution in France:

Noise pollution is a nuisance that the average person should take seriously. As a matter of fact, this life tainting issue is causing severe health concerns throughout the globe. According to the Hearing Foundation of France<sup>10</sup>, inhabitants of Ile de France lose on average 10.7 months of life expectancy due to noise pollution. A further shocking stat is how much this pollution is costing the French public. The National Noise Council has estimated this social expenditure to be EUR 57 <sup>11</sup> billion in 2016, or in other words, 2% of the French GDP.

According to the Kantar study made for the Ministry of Ecology and Energy "The French and the sound nuisances"<sup>12</sup>, 2 out of 3 Frenchmen declare being bothered by noise at home. This study was conducted in 2010 with a sample of 1000 French nationals aged 18 and over.

Having to Feeling Having to increase Not being Thinking Having to Having to fatigued being interrupt exit the windows able to moving home volum 23 12 11 10 8 8 8 7 4 Total Inhabitants of 45 25 17 25 13 25 20 20 Paris, Lyon and 14 (+13) (+15) (+16) (+17) (+22)(+6)(+5) (+12)(+7)Marseille Inhabitants of 35 16 17 17 14 12 14 9 7 apartments (+12) (+7) (+6) (+4) (+6) (+2) (+3) (+4) (+6) Young people aged 33 12 19 11 16 16 9 11 7 between 18 and 24 (+10) (+8) (+8) (=) (+8) (+1) (+1) (+4)(+3)

The following graph indicates the effects this pollution has on the population living in big cities, apartments and the young people of France.

Such figures highlight the fact that noise pollution is heavily present in urban areas and that it not only affects the elderly residences. A staggering 16% of young people admitted not being able to sleep or concentrate and 20% of inhabitants of the 3 biggest cities in France have declared that they

have had to exit their home due to noise pollution present in the building showing that there is still room for action in order to propose a better way of living to the French people. Noise should be treated as importantly as air quality or public cleanliness, which is how the population views it according to the right-hand side graph entitled: "How noise is a relative discomfort with respect to other nuisances".



<sup>22</sup> 

<sup>&</sup>lt;sup>10</sup> <u>https://www.fondationpourlaudition.org/fr</u>

<sup>&</sup>lt;sup>11</sup> <u>https://www.fondationpourlaudition.org/fr/pollution-sonore-un-danger-reel-pour-la-sante-406</u>

<sup>&</sup>lt;sup>12</sup> tns-sofres.com/sites/default/files/2010.06.29-nuisances-sonores.pdf (All data is expressed in %)

### 3. Noise pollution at work:

One of the main inconvenience noise pollution causes is the negative effect it has on concentration. A worst-case scenario is when this occurs in a working environment such as offices. It is apparent that a direct link with counter-productivity and employee well-being can be made.

The Institute of Opinion and Marketing<sup>13</sup> in France made a study<sup>14</sup>, translated from French, that holds the title of "Noise, hearing health and quality of life at work 2019". For this study, the survey was conducted among a sample of 1013 people, representative of the active French working population aged 18 and over. The study is divided into two main groups that show how seriously noise is affecting the French people at work. The first set of results indicates the consequences and the second identifies the resulted action taken towards these consequences.

A shocking 59% answered "yes" or "yes from time to time" to the question "Are you personally bothered by noise in your workplace?". To this, 36% of the people who answered yes admitted the origin of that noise came from outside of the offices and 33% answered the origin came from in office equipment such as printers. Thus, reflecting the poor sound proofing equipment of materials used in professional environments in France today.

The graph<sup>15</sup> below indicates the personal and social consequences that uncontrolled noise has on French workers. It clearly indicates that this issue not only has repercussions on productivity but as well on harmony amongst colleagues. Such factors have huge economical outputs. It is therefore logical to state that by investing in sound proofing, companies would improve on performances and growth while enabling their employees to work in more comfortable surroundings.



<sup>13</sup> <u>https://www.ifop.com/</u>

<sup>14</sup> <u>https://www.ifop.com/wp-content/uploads/2019/10/116601-Présentation-publiée.pdf</u>

As a result of the consequences indicated by the graph, 22% of people answered that there were repercussions such as work stoppage (14%), team changing (12%) or redundancies (9%). An interesting observation occurred. When asked: "What solutions have been proposed or implemented by your employer to reduce noise and noise in your workplace?", the sample of the population answered the following:



Such results show that companies understand that there is a threat to the workforce and that action must be taken to tackle it, therefore, reflecting a receptive detail for Acoustica's development.

### 4. Noise pollution in transport:

The first image that comes to mind when thinking of noise pollution is a loud highway or a Boeing flying too close to home. Not surprisingly, more than half of the 1000 French nationals questioned for the Kantar study admitted that transportation was their main source of sound nuisances in their daily lives. Additionally, a staggering 59% revealed that road transportation was aggravating them the most and that airborne noises was the second biggest inconvenience.



An interesting data that the study revealed was the type of housing and locations of each noise nuisance linked to transportation. Not surprisingly, road transportation is highly linked to obsolete or poor-quality style housing. Another compelling observation is that the Paris region being the airport hub in the country, suffers the most due to airborne activities. A matter that introducing Acoustica's products could clearly help prevent.

Road transportation 59%	Air transportation 14%	Railway Transportation 7%
Resident of housing built	Young families 24%	Apartment owners 14%
between 1950 and 1970: 71%		
Residents of urban areas of	Parisians: 22%	18 to 24-year olds: 13%
20,000 to 100,000 inhabitants:		
67%		
	Residents of large urban areas	Residents of large urban areas
	+ 30 000 inhabitants (outside	+ 30 000 inhabitants (outside
	of Paris, Lyon and Marseille):	of Paris, Lyon and Marseille):
	20%	12%
	Residents of individual houses:	
	18%	

Governments and institutions have long identified the issue, but unfortunately, many of the tools put in place have not shown great results. Such tools and policies as the HEAVEN project<sup>16</sup> (Healthier Environment through Abatement of Vehicle Emission and Noise) have indeed tried to reduce noise constraint through methods such as traffic regulation. By limiting speed of goods vehicles to 30km/h or banning heavy goods vehicles in certain areas of mainland European capitals such as Berlin, Paris and Rome, the European union believed that would have a significant impact on noise reduction. However, the difference in decibels post-project implementation was only 1 to 2<sup>17</sup> decibels, thus indicating that governments are willing to tackle this problem but are facing challenges to do so.

<sup>&</sup>lt;sup>16</sup> <u>https://trimis.ec.europa.eu/entityprint/node/8444</u>

https://ec.europa.eu/environment/integration/research/newsalert/pdf/noise abatement approaches FB17 en.pdf p13

#### 5. Prevention

Countries have long tried to limit noise community noise by controlling air, railway and road transportation such as reducing speed limits in specific areas. Construction sites and industrial plants have seen the enforcement of emission standards in order to try and reduce the nuisance they create for close inhabitants. These policies have helped reduce the nuisance but are not enough. To add to this complexity, there is a difficulty to define and control noise from the neighbourhood and, therefore, there are very little norms and policies to reduce the levels. On a global scale, there are 3 different types of noise prevention categories:

**Legal measures** have been implemented by institutions such as the European Commission. This entity has developed legal projects such as "SILENCE" which has enabled a new method to control transport noise for road and rail in urban areas by providing a toolkit composed of management strategies, driver support and a roadside monitoring system. Another project installed by the EU was the "Optimisation for low Environmental Noise Impact Aircraft" (OPENAIR) that aimed to reduce airborne noise by 2.5 dB by implementing new regulations and developing new aeroacoustics. Additional legal frameworks have been implemented such as the 2002/49/CE<sup>18</sup> directive that imposes all member states to determine noise exposure levels, adopt action plans to counter them and to deliver the information publicly.

**Education and information** are a necessity to counter this pollution. Raising public awareness for all generations will help build a quieter future for our communities. This will be achieved through specific action plans such as monitoring soundscapes and publicly exposing them. There is clearly a need for noise experts and, therefore, a push for Universities to propose precise curricula on the topic. Like for any type of pollution, a way to combat it would be to change individual behaviours concerning the issue such as speed reduction when driving, use of horns or loudspeakers for advertisements.

**Engineering measures** are a clear aspect in the development of preventing noise spreading hazardously. It will be through this category that Acoustica will come into play. This being a most technical and broad category, there are numerous ways engineering measures can have a positive impact on the problem. Firstly, new engine technology can be developed as we have seen in the recent years with automotive companies such as Tesla developing electric engines with very little noise emission. Secondly, the design and structure of buildings will help protect cities acoustically. Using building for screening through their orientation can reduce noise spread. Thirdly, the implementation of acoustical insulation products will prevent, and counter noise spread for individuals, companies and governments.

<sup>&</sup>lt;sup>18</sup> www.noiseineu.eu/fr/14-l\_union\_europeenne\_est\_mobilisee/subpage/view/page/43

## 6. A few words on the soundproofing industry:

Before entering the specifics of this thesis, a few explanations are required. There are different surfaces where soundproofing is applied. Here are the different types of applications.

- Exterior Application
  - ➢ Façade:

The insulation of a façade. This concerns all contact with the outside such as walls, doors and windows. The soundproofing aspect of this surface is generally taken care of by building materials and is, therefore, dominated by concrete manufactures such as Hi-Spec concrete UK<sup>19</sup> or thermal insulation producers such as Celotex<sup>20</sup>.

Roofing:

A second subcategory of the exterior application is the roofing insulation. This requires both thermal and acoustic insulation that is mostly covered by thermal insulation productors such as fibre glass or insulated wool.

- Airborne noise
  - Sound insulation of airborne noise concerns the insulation of the internal walls of a building in order to attenuate the noise coming and going between the rooms of the same building. It is therefore mainly walling and interior doors, floors, ceilings and movable partitions.

#### Impact noise

- The soundproofing of impact noise concerns primarily the floors and ceilings of a building. The impact noise or shock noise spread in the building frame originates from a direct contact between a source and the structure of the building. As a result, this specific sound proofing can be of two different types:
  - A sound reduction from the source of the impact, consisting of reducing the energy that is emitted at the structure by adding a more flexible and denser material (felt pads, thick full carpets, ...)<sup>21</sup>.
  - A sound spread reduction through a floating system that enables a breakthrough in the path of the impact wave towards the structure of the building. This technique has proven to be much more performant than the other. The idea is to place a sub layer of sound proofing material between two flat concrete screeds.
    Various sub layers of sound proofing are available on today's market. Their acoustic perfomances depend on their flexibility, thickness and



quality. Impact noise sound proofing is more commonly always performed at the

<sup>&</sup>lt;sup>19</sup> <u>https://www.iscconcrete.co.uk/</u>

<sup>&</sup>lt;sup>20</sup> https://www.celotex.co.uk/

<sup>&</sup>lt;sup>21</sup> http://www.insulco.be/

construction of the building. The product choice will entirely depend the the available space for the installation as well as the installation of a equalizing screed to cover the tubing and other installations. Withouth this screed, the manoeuvability of the acoustique membrane becomes paramount.



- Installation noise
  - The sound proofing of building installations concerns noise insulation of machines and ducts of a building such as pipes, boilers, radiators, etc. The environment is generally more extreme (high temperatures, strong vibrations, projections of oil) in which the insulation must be able to withstand and keep its acoustic properties.
- Reverberation time<sup>22</sup> (noise comfort of a room)
  - Soundproofing called "reverberation time" is the insulation against the reverberation (echo) of sound waves in large rooms (halls, pools, audiences, ...). The insulation boards must have absorbing properties and are intended to minimize the propagation of sound. The insulation is usually suspended from the ceiling or placed on the walls.

 $\rightarrow$  Acoustica's products are used for protection of all the above except for exterior applications.

<sup>&</sup>lt;sup>22</sup> The reverberation time of a room or space is defined as the time it takes for sound to decay by 60dB. For example, if the sound in a room took 10 seconds to decay from 100dB to 40dB, the reverberation time would be 10 seconds.

# **Reference Framework**

As harsh as it may seem, the issues that noise pollution represent for France's population will be considered as opportunity for Acoustica. A key objective will be to identify which sector covers which type of sound pollution. Thus, having as objective the capacity to cover the overall nuisance that is present in France. Once the sector identified, data will have to be collected to see if it is in expansion or decrease in France in a goal to have a clear picture on the country's market attractiveness.

The issues	Sector where the issue is present	Expansion or decrease	Info on the sector
Noise pollution at home	Residential construction sector	Expansion	"Market potential – Residential development" p45.
Noise pollution at work	Non-residential construction – Industrial sector	Expansion for both	"Market potential – Non-residential development" p 46. "Market potential – Industrial development" p50.
Noise pollution in transport	Airborne – Road - Railway	Expansion	"Market potential – Transportation" p52.

# Methodology

Section	Propositions	Research method	Propositions validation
Literature review	France holds severe noise pollution.	Desk research.	Validated
Internal Analysis	Acoustica holds enough resources and experience for export.	Desk research of the company. Field research through interviewing the CEO.	Validated
Market Analysis	The French market is favourable for the importation of Acoustica's products.	Desk research on the development of different industries linked to noise pollution	Validated
Competitor Analysis	Acoustica's products have enough competitive advantage to survive the export.	Desk research of French competitors.	Validated

Forms of			
Implementation	Direct export is	Desk research on	Rejected
	recommended	customs and logistics	
	Indirect Export is	Desk research on	Validated
	recommended	customs and logistics	

# Analysis of the information

### **Internal Analysis**



Acoustica is Australia's noise control specialist. The CEO, Philippe Doneux founded the firm over 30 years ago after working for a large Australian group named LNC. He initially started developing soundproofing material for the group. Once the group was sold off to private entity, he decided to start his own business in the acoustic field.

Today, Acoustica proposes a cross-sectorial list of products than can be applied to all environments such as offices, residential homes, studios, airborne, pipe lagging, and so forth. « Innovation » is an aspect that is in Acoustica's day to day life. In fact, the company is divided into two separate entities. A factory and research and development branch as well as a project management office. These two components work alongside each other to promote and develop the brand on daily basis.

Legal Name	Acoustica Pty Ltd	
Company Type	PTY = Proprietary Company (private)	
Number of Employees	17-20	
Location	Sydney, Australia	
Creation Date	1988	
2019 Turnover	EUR 2.7 million	

ID CARD:

## Marketing Mix



Name	Image	Description	Technical Data
Descor®		Acoustic stretch fabric to be mounted on walls or ceilings. Fully customisable in choice of colour or photo.	Polyester knitted fabric with polyurethane coating. Thickness: 20pprox 0.44mm
KlipTex <sup>®</sup>		An attractive acoustic answer to wallpaper, KlipTex allows you to cover your walls in any material whilst it cleverly soaks up sound through its concealed noise absorbing frame.	Thickness: 25/50 mm
Cheops®		Cheops <sup>®</sup> attaches to walls and ceilings for a seamless design. Available in 14 standard colours or a custom colour option.	Effective at absorbing all frequencies from 0.8 to 1.05 decibels, Thickness: foam panels come in 50, 75, 100 or 100mm width
QuietX <sup>®</sup>		The discreet sound solution that doubles as wall décor, QuietX sound absorbent panels combine personalised printed fabric with <i>EchoSoft</i> – a superior lightweight noise absorber.	The use of harmful chemicals has been eliminated in the QuietX® fabric printing process. The panel system is 100% recyclable. Thickness: 25/50 mm

HD Batts	Minimise impact noise and sound transfer between rooms, ceilings and floors with Acoustica's HD Batts. A high-performance sound absorber for residential, industrial and commercial properties.	Durable, dust-free high-density polyester Thickness: 25-100 mm
EchoSorb <sup>®</sup>	Offering superior sound absorption for large spaces, EchoSorb acoustic panels can reduce noise levels by up to 50% making it an ideal solution for halls, auditoriums, theatres and leisure centres.	Made from 100% Polyester Fibre (PET) Thickness: 25-50 mm
EchoSoft <sup>®</sup>	Reduce echo, absorb sound and maintain temperature with EchoSoft. Simply install behind ceiling and wall panels for instant acoustic comfort with no framing or facing needed.	Made from thermally bonded moisture resistant polyester fibre, EchoSoft <sup>®</sup> features a minimum 80% recycled content and is 100% recyclable, making it the perfect choice for environmentally friendly sound control.
QuietSpace®	Lightweight, thin and suitable for framing, QuietSpace acoustic wall panels offer maximum flexibility and sound control in smaller spaces.	Thickness: 25-50 mm QuietSpace® is the creative, interior design solution to reverberated noise. Create unique wall art thanks to its print compatibility. Use it for office partitioning, as an acoustic pin board or room divider. Thickness: 6/12 mm

AngelStep®		
	Acoustica's best performing flooring underlay range, AngelStep is the top choice for discerning residential and commercial developments where maximum impact noise control and sound absorption is needed.	Dependent on the floor finish, Acoustica will advise if an intermediate layer such as plywood or fibrous cement substrate will need to be installed. <i>Patented product.</i> Thickness: 4-10 mm
GreenLAG®	A revolution in pipe lagging, GreenLAG is the superior solution for water waste acoustic insulation.	Combining a patented visco-elastic <sup>23</sup> QuietWave® noise barrier with micro- cellular acoustic foam, GreenLAG® increases vibration damping through its soft microcellular material for exceptional sound transmission loss.
VyBar®	VyBar is a rigid marine noise barrier and vibration damping sheet specifically engineered to combat the challenging combined effects of vibrations, sound transmission and reverberation from marine engines and boat hulls.	Tested and certified to meet marine technical requirements and resolutions, fire rated to international standards
QuietWave®	QuietWave acoustic plasterboard barrier is the most economical 6- star acoustic wall system available. The thinnest and lightest way to achieve the highest acoustic performance. Effective for low frequencies to counter everyday noise from home audio and theatre systems.	QuietWave <sup>®</sup> consists of a flexible visco- elastic membrane and patented constrained layer membrane, combined with vibration damping material. <i>Patented product.</i> <sup>24</sup> Thickness: 1.2 mm

 <sup>&</sup>lt;sup>23</sup> Definition of viscoelastic: (of a substance) exhibiting both elastic and viscous behaviour when deformed.
<sup>24</sup> Patented in China, Australia, New Zealand, main countries in Europe, Canada and the USA.

AcoustiFlex®	AcoustiFlex SQ flexible noise barrier is one of the most effective sound solutions for aircraft noise, traffic and railway disturbance. Offering exceptional high performance, AcousitFlex SQ is durable yet flexible enough to be used almost anywhere noise control is needed. Hang or drape over fencing at construction sites or apply to walls and ceilings to block out noise from neighbouring properties and offices	Available in a choice of roll sizes, weight and thickness, AcoustiFlex SQ features a soft and flexible visco-elastic membrane bonded to an aluminium facing foil with a reinforced polyester backing. It's easy to cut and offers superior performance across the whole frequency spectrum. <i>Patented product.</i> Thickness: 2.5-4.5 mm
CurtainWav e®	CurtainWave SQ is the easy and simple way to block out sound using existing curtains and window décor. Simply sew CurtainWave <sup>®</sup> SQ directly to the back of any curtain or window hanging material and it will not only absorb and reflect sound but black- out light and act as insulation, reducing energy costs.	CurtainWave® SQ is made using a patented lightweight visco-elastic membrane, which enables it to achieve the same acoustic rating of material that's twice as heavy.
DoorSeal®	Even the smallest gap around a door reduces its ability to shut out noise. Acoustica's DoorSeal system effectively closes the gaps for secure, soundproof door sets that meet the necessary specifications.	To maintain privacy and the required sound transmission loss ratings with acoustic door sets (frame, door and seals), we offer acoustic seals to provide a barrier to airborne sound and help ensure that the acoustic performance provided by a door set which conforms to the specified rating for the wall or partition into which it is installed.

AeroPac <sup>®</sup>	Whisper quiet to operate, AeroPac is the solution to improve interior air flow and quality when windows can't be opened due to noise and pollution.	Low running cost – uses as little energy as a TV on stand-by.
	Perfect for sound- sensitive environments like bedrooms and living	
	areas, AeroPac <sup>®</sup> combines state-of-the- art acoustic technology	
	with professional filtration to silently feed a draught-free flow of	
	fresh healthy air into your room.	467mm high x 270mm wide x 132mm deep



Acoustica is divided into two subcompanies:

- Acoustica PTY LTD (APL)

Acoustica PTY LDT (APL) holds the production site. This contains all machinery for manufacturing the products, a stock area as well as offices for the sales team and R&D.

# The Factory:





- Acoustica project management PTY LTD (APM)

Acousitca project management PTY LTD (APM) ensures all national project development. A modern office that holds most of the company's innovation awards.

## The Office:






Logo:



Nationally trademarked, the logo came to mind for the simple fact that there is always a company mascot in the office. Mr Doneux is a dalmatian fanatic and has had many over the years.

Indeed, it is important to underline that the logo and brand are protected in Australia only. An expansion in France may demand further protection.

Social Media:

The company invests little in its online presence.

- Instagram:



## - Additional data

	Acoustica PTY LTD (APL)	Acoustica project management PTY LTD (APM)
Facebook	/	82 Followers Frequency: 2 posts/week
LinkedIn	66 followers	5 followers
SEO	11 <sup>th</sup> position, page 2 on Google	1rst position on Google

# $\rightarrow$ Platform engagement rate<sup>25</sup>:

• Instagram:

Acoustica APL has much better engagement than Acoustica APM. However, the number of followers is much lower. A need to expand this number in both accounts could be taken into consideration in the "Development Strategy" section.

Awards:

Over the years, Acoustica has received numerous awards. All of which had one aspect in common, outstanding innovation.



 $<sup>^{25}</sup>$  Less than 1% = low engagement rate. Between 1% and 3.5% = average/good engagement rate. Between 3.5% and 6% = high engagement rate.



• The company sometimes requires hiring additional factory workers on temporary bases.

# Value Chain Analysis



**Primary Activities** 

# Support Activities:

## 30 - Firm Infrastructure:

Acoustica is divided into two subgroups. One group assures production and sales. The other group develops close client relationships through project management. The second entity creates made to measure solutions for its clients and installs them. Each group has an accountant to ensure yearly organisation. Above the group's managing directors is the founder and majority shareholder, Philippe Doneux. He is still very implicated with the company's view and planning as the managing directors report to him on frequent basis.

## - Human Resource Management:

The recruitment process in both firms is ensured by the managing directors. From a to z, they have the responsibility to find new potential employees, interview and hire them. Acoustica believes in proximity management. Hierarchy is not an important concept for the Australian group. Employees are associates and the company operates as a team. All personnel receive a fixed salary base as well as extra-legal advantages such as medical care. Concerning the sales

team, they receive the identical benefits but are payed through a smaller fixed salary along with an uncapped commission program.

- Technology Development

The company holds a research and development unit in their factory. Mainly composed of Mr Doneux and a chemical engineer, the unit designs and tests new products. Such tests include acoustical, fireproof and pressure measurements. This is a vital part of the process to make sure that the product's technical sheets are aligned with market regulations.

To this day, the company does not use an enterprise resource planning software for the various business activities.

#### - Procurement

#### Philippe, Doneux. Personal interview. 18 March 2020.

"We purchase from China our aluminium foil and some needle punched polyester for our flooring product. All chemicals, fillers (calcium carbonate for adding weight to our product), foam for our lagging material are purchased locally in Australia.

The PVC material is held by an outside company for us (generally a 6-8-month supply period). we did a deal that we will not purchase from another supplier as long as they keep stock without cost to us.

Purchase from China is triggered when approximately we reach a minimum 3-month stock level."

# **Primary Activities**

- Inbound Logistics

Concerning national procurement of components, providers assure delivery using the DDP (Delivery Duty Paid) incoterm<sup>26</sup>. For components from China, the majority sell the components using the FOB (Free on Board) incoterm. As a result, the components arrive at the Sydney Port Botany harbour. It is then the responsibility of Acoustica to transfer the components from the harbour to the factory. They do so by using the service of the global logistics company called TNT for all national orders.

- Operations

Production is driven by demand. They have very little stock. In fact, they only stock one current pipping product. To this day, production runs around 30% of the capacity of the plant. This is for one shift only. If a boost in production was needed, the hiring of an extra factory staff would increase production by 20%. As a result, the production aspect of the firm is extremely flexible.

<sup>&</sup>lt;sup>26</sup> Incoterms are sales contracts defining respective obligations, costs, and risks involved in the delivery of goods from the seller to the buyer. *Full incoterm list in "Annex 1"*.

Due to its relatively small structure, the firm operates efficiently without the need to adopt an ERP<sup>27</sup> software. Orders are directly given from the sales team to the foreman using excel spreadsheets. Vis versa, the foreman delivers the inventory levels to the managing director as he organises the procurement of components.

#### - Outbound Logistics

The incoterm used for outbound logistics is case per case. This is concluded by the sales team during business negotiations. When Acoustica deals with a client through their project management team, full delivery and instalment is covered as they propose turnkey solutions.

However, must commonly for national clients, delivery to door is assured. For foreign costumers, the incoterms EXW<sup>28</sup> or FOB are mainly used. IF necessary, a DDP incoterm can be applied managing a rise in the sell price. Outsourcing having huge business advantages, inbound and outbound national logistics are handled by the same transporter, TNT.

#### - Marketing & Sales

After analysing the "promotion" section in the "marketing mix" part, it is obvious that Acoustica does not invest much capital in its online presence. After questioning Mr Doneux on the subject, he gave the answer that the company has been operating since such a large amount of time that the need to promote on the web has never been met. They are well established and exert a good level of notoriety that word of mouth along with the work from the business development section has sufficed to let Acoustica grow in the position it is today. The marketing is managed by the managing directors, the sales manager and Mr Doneux. This is performed through frequent meetings.

## - Service

All products that are manufactured by the company come with a 10-year guarantee. This covers any malfunction that could cause low performances. For large orders, the company subcontracts with local logistic companies as well as export agents for overseas deliveries. The project management team holds qualified installers. Therefore, they can offer a complete turnkey solution. Production, delivery and instalment is provided. For any post sales query or issue, Acoustica will react directly even at their own cost. Service reputation is vital in this industry.

<sup>&</sup>lt;sup>27</sup> Enterprise resource planning is the integrated management of main business processes, often in real time and mediated by software and technology.

<sup>&</sup>lt;sup>28</sup> Ex works (EXW) is an international trade term that describes when a seller makes a product available at a designated location, and the buyer of the product must cover the transport costs. A detailed incoterm list is available in the "Annex 1"





# **Export Diagnostic**

The primary purpose of this diagnostic will be to assess whether the company is ready for this export. A green, orange or red light will be given depending on the result of the internal aspects studied. The diagnosis is based on different strategic parameters: the production tool, the financial aspect, the products, the degree of preparation for export and, finally, the quality of management.

# The Production Unit

- $\rightarrow$  Who makes the products?
- $\rightarrow$  Will more human resources be needed to manage the external markets?
- $\rightarrow$  In which quantity are products manufactured?

Acoustica assures all of its productions except for the Aeropac air ventilator that they purchase through a German firm by a "white labelling" manner. Production ownership comes with additional risks. However, the company is free to produce the quantity they need and have no design restrictions, making private ownership favourable for any export.

The current production capacity has reached 30% of the total manufacturing limit. 60 to 70 % of this is dedicated to the GreenLag product as it is in constant demand.

Currently, there are 4 factory employees dedicated to the production line. Mr Doneux has informed that by adding one more production aid, such as an outside casual worker, daily production would increase by 20-25%. As a result, and if necessary, the hiring of an extra production line staff is feasible. These figures are based upon one production line shift. Meaning that any excess demand can easily be covered by adding a night shift for example. The company specifically uses the "JEEP" (JustEnoughEssentialPeople) method in order to cover risks. If sales are low, the repercussions are less since they will only apply to fewer people.

Due to its relatively small structure, visibility between Acoustica's department is clear. This allows them to proceed with the "Just in time" stock management method. Enabling them to minimise stock waste. The company only stocks one to two days' supply of the GreenLag product.

# **The Finances**

- $\rightarrow$  Turnover: EUR 2.7 million (2019)
- ightarrow Financial independence: yes

Mr Doneux built the business completely on his own. Step by step, Acoustica grew acquiring the necessary infrastructure and capital to cover national and international markets. Today, this financial freedom allows the firm to seek further foreign opportunities. Without the need to report to investors or higher authority, Acoustica has the liberty to decide every step of the foreign expansion.

# The Products

- $\rightarrow$  Gross Margin:
- $\rightarrow$  Customer Service:
- $\rightarrow$  Legal Product Protection: worldwide patent

The majority of Acoustica's product have been independently designed by the firm. The need to legally protect the products by mean of patenting was a vital step for business growth. Having different geographical regions where the patent is applied, the company decided to go for worldwide cover. Their products are protected in China, Australia, New Zealand, main countries in Europe, Canada and the USA.

Product components are either sourced nationally in Australia or come from mainland China. Trust are in both providing countries. However, the raw material such as aluminium foil or polyester procured from China are considered non-rare resources. Thus, adding a positive argument to procurement negotiations.

Concerning market acceptance on a regulatory level, the products are fully tested and certificated for the current markets. They will still have to be certified and accepted by the testing authority in France. Nevertheless, this shows to be extremely plausible. Further details of the market acceptance will be developed in the "Development Strategy" section.

# Degree of preparation for export

- $\rightarrow$  Formalities knowledge? Yes
- $\rightarrow$  *Export experience?* Yes
- $\rightarrow$  Other prospected markets? The company holds clients in other European countries.
- $\rightarrow$  Trademarked in France? No

The fine thickness and durability of Acoustica's products makes them favourable for transport. The company is familiar with entering a European country as it holds clients in Germany, Italy and Belgium. It has also shown to be able to identifykey

partnerships abroad. In Belgium, the company has teamed up with Homeos. This firm proposes acoustical material in the Benelux. They produce some eco-friendly products of Acoustica, that they pay as a percentage of the profit that is made. In other words, the Australian group is not a novice in the export field.

The fact that Acoustica is not trademarked in France will have a more substantial negative impact depending on the foreign expansion strategy that will be developed ahead (direct export or creation of a foreign business entity).

# **Management Quality**

	Note out of 5	Examples
Commercial Dynamism	5	Project management team to provide turnkey solutions. Business trips to selected markets to understand local needs.
Forecasting Prevention	4	Full Ownership of manufacturing plant. Dependence on local and Chinese providers.
Ability to Adapt and Control	5	Full ownership of factory and project management makes service and product customisation possible.
Know-How and Mastery of Trade	5	The company has qualified staff such as engineers and has been in business for over 30 years.

# Conclusion

Based on internal information and the company's past, the summary is clear. The export capacities of Acoustica seem favourable for the international expansion in France. The light is therefore **green**. However, it is necessary to look at the external environment and development strategy in order to be able to establish a complete SWOT matrix which will allow us to confirm or disapprove this first conclusion.



#### **Market Segmentation**

(Segmentation Strategy = divided by end user) *The need is the same for all segments. Protecting individual actors from noise pollution. What differs is the product and quantities as well as business relation.* 

- Building & Construction

The need for building and construction companies is to assure acoustical regulations are met through the building projects. They have a need to protect individuals from outside noise and to have a good noise passage through the inside of the construction.

- Industrial

Industrial companies usually operate in noisy environments. Heavy machinery, pipe lagging, and large dense materials are all factors that plunge the employees of industrial companies in high stressed workplaces. These companies have a need to protect their staff from heavy noise emissions coming from inside the workplace.

- Transportation

The biggest noise pollution source is transportation. With stricter regulations being informed by the World health Organisation and imposed by the European Union, new public transport projects are underlining the fact that the limitation of decibels is crucial for an organic development. The companies that put these projects to life need to protect the traveling personnel and costumers as well as the surrounding population.

- B2C private individuals

An expand in population comes with an expand in noise. More and more private individuals feel the need to have a noise free home or just for leisure purposes, require the need to soundproof a room for a home studio or home cinema.

#### **Market Targeting**

Due to their common needs and that Acoustica's products can be of use of all segments, the marketing strategy that is applied is mass marketing. In other words, the company targets the whole market ignoring segments. They focus on what their clients need and want in common. This aspect might require to be remodelled in order to develop the business in France.

#### **Market Positioning**

For any entity or individual willing to benefit from extra acoustical protection, Acoustica's products will help lower the impact of any sound pollution type. Making your environment the most serene and work efficient possible.

A positioning map will be elaborated in the competitive analysis.

**Business Canvas** 

Key Partners	Key Activities	Value Proposit	ions 🖬	Customer Relationships 🖤	Customer Segments
<ul> <li>Raw material suppliers</li> <li>Distributors</li> <li>Logistic companies</li> <li>Acoustic architects</li> <li>Certificate distributors</li> </ul>	<ul> <li>Research &amp; Development</li> <li>Production</li> <li>Acoustic consulting</li> <li>Key Resources</li> <li>3 corporate entities:</li> <li>R&amp;D Plant</li> <li>Factory &amp; machinery</li> <li>Business unit</li> <li>Stock</li> <li>Workforce</li> <li>Patents</li> </ul>	- Effec corre prote - Long envir frien	tive acoustic action and ection lasting & onmentally dly offer	<ul> <li>One off sale</li> <li>Long term contracts</li> <li>Channels</li> <li>Website</li> <li>Social Media</li> <li>Sales/Customer service team</li> <li>Project management team</li> <li>Acoustic architects</li> </ul>	<ul> <li>Private individuals</li> <li>Construction companies</li> <li>Public entities</li> <li>Aeronautic manufacturers</li> <li>Acoustic Wholesalers</li> <li>Acoustic architects</li> </ul>
	Patents				Ă
Cost Structure - Salaries - Cost of buildings - Raw material (R&D - Manufacturing	g - Marketing - Logistics)		Revenue Strea - Direc - Proje - Licen for w	ums et sale model ect consulting model ce model. Factory in Belgium tha hite label production.	s t pays dividends to Acoustica

# Market Analysis

In order to underline the opportunities that lie in France, multiple factors will be analysed. It is crucial to understand how the French live and what are the future trends of the industry to see if the country will be receptive to the company's products. Thus, a market potential, legal framework and key market actors' section will be developed hereunder.

# Market potential

#### **COMMERCIAL OBSERVATION**

France is the 20<sup>th</sup> richest economy per capita. It holds a GDP per capita of 35 050 euros for a population of 66.9 million. According to the Economic Complexity Index, France is ranked 14<sup>th</sup> worldwide, highlighting the country's development in production and business environment. Inflation rate is interesting for any business venture in a given country. This rate has seen a low level of 0.7%<sup>29</sup> in October 2019.



The graph<sup>30</sup> indicates the country's openness to trade. This is a potential eye opener for any foreign company willing to promote business in the European state.

#### Total merchandise trade

(millions of US\$)	2005	2010	2015	2018
Merchandise exports	463 428	523 767	506 264	581 872
Merchandise imports	504 124	611 070	570 758	672 549
Merchandise trade balance	-40 696	-87 303	-64 494	-90 677

A promising demand being expressed by the number of imports, it is satisfactory to see that France has a growing import ratio.

Concerning commercial relations between Australia and France, they seem to be promising. France is Australia's fourth largest trading partner in the EU. In 2018, this represented EUR 940 million in Australian exports.

<sup>&</sup>lt;sup>29</sup> <u>https://tradingeconomics.com/france/inflation-cpi</u>

<sup>&</sup>lt;sup>30</sup> https://unctadstat.unctad.org/CountryProfile/GeneralProfile/en-GB/251/index.html

The World Bank publishes a yearly "Doing Business in" report<sup>31</sup> that expresses commercial regulations in over 190 economies. This trusted entity gives out a rank as well as a score for business development ease in the studied countries. In the 2020 report, France is 32<sup>nd</sup> out of 190 and holds the fine score of 76.8. The Report also illustrates interesting figures such as data concerning the enforcement of contracts or resolving insolvency.



The graph also indicates the high score France has in "Dealing with construction permits". It has a comfortable score position just behind Germany and indicates high building quality control index which is promising for a soundproofing company.



<sup>&</sup>lt;sup>31</sup> <u>http://documents.worldbank.org/curated/en/428441574859959223/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies-Economy-Profile-of-France</u> Complete country Profile in "Annex 2"

#### **RESIDENTIAL HOUSING**

An interesting feature to indicate is the occupation of the housing market in France. The lower the number of people per housing, the higher the number of housing in the country and therefor the higher potential for any construction related company. The following graph<sup>32</sup> indicates that, in 2011, two thirds of the public housing in France was being occupied by one or two individuals. Indeed, the number of housing in France is high. In 2014, this represented 546 housing facilities per 1000 individuals. The graph shows that a high number if housing is occupied by only one person. This number can grow in areas such as the capital, where Paris counts

Distribution des logements selon le nombre d'occupants en 2011



51,1% of housing used by only one individual. However, this solo or near solo housing feature has shown a light drawback. Since the 2008 crisis, the number of young adults living with their parents has increased. In 2007, the young population (aged between 15-29) residing with their parents represented 41%. In 2014, that percentage increased to 53,5%. Such increase is not specific to France and has shown to be common in most European member states.

There lies potential for Acoustica in housing renovation. Even more potential will be present in new housing development. As a result, it is interesting to identify if France has new constructions trends or if the country holds a slow construction rate. The following graph answers that question very clearly. As a matter of fact, France is the biggest housing constructer per habitant in all of Europe. The graph holds as title "Number of households built per 1000 individuals." It indicates that over 6 housing models are built.



Sources : OCDE, Questionnaire sur le logement social et abordable (2015) pour la construction et Eurostat (2015) pour la population -Traitements du bureau de l'observation des territoires • Réalisation : CGET, 2017

Such explanations to this trend are linked to the demographics of the country. As reported by the French government, France has, with the United Kingdom, the biggest demographic growth in Europe. This represents 330 000<sup>33</sup> extra inhabitants per year thus increasing the number of housing

<sup>&</sup>lt;sup>32</sup> <u>https://www.observatoire-des-territoires.gouv.fr/observatoire-des-territoires/sites/default/files/Fiche-OT-le%20parc%20de%20logements\_0.pdf</u> p4

<sup>&</sup>lt;sup>33</sup> <u>https://www.observatoire-des-territoires.gouv.fr/observatoire-des-territoires/fr/dynamiques-de-population</u>

being built. The National Institute of Statistics has stated that in 1988, there was 26 097 000<sup>34</sup> housing models in France. That number today has reached 36 330 000 and holds a 1,1% yearly increase thus representing the astounding potential of 399 630 new homes.

# NON-RESIDENTIAL DEVELOPMENT

a. General Figures

In only one year, 41.6 million sqm<sup>35</sup> of non-residential projects received construction permits in France. This represents a yearly growth of 4.3% compared to 2018. In other words, 1 323 200 sqm were authorised for the construction of hotels, 5 801 500 sqm for offices and 6 209 100 sqm for the public sector. The left-hand side graph<sup>36</sup> indicates all non-residential sectors for which construction permits were allocated. An interesting feature to explore is the areas in France with the biggest

Autorisés	41 592,2	
lébergement hôtelier	1 323,2	and the second s
Bureaux	5801,5	
Commerce	4142,8	
Artisanat	1 909,3	and the second
Industrie	4007,0	Taux d'évolution en %
Exploitation agricole ou forestière	9 562,0	Supérieur à 10     Entre 0 et 10
Entrepôt	8637,3	<ul> <li>Entre −10 et 0</li> <li>Inférieur à −10</li> </ul>
Service public ou d'intérêt collectif	6209,1	

growth in non-residential construction permit allocation. The right-hand side graph<sup>37</sup> indicates that for the past 12 months, the northern section of France has seen high development. Areas such as Normandie (top left section on graph) have seen an increase of 11.5%. The region with the highest growth rate is "Hauts-de-France" (right side of Normandie) with 28.2%. Other regions such as Paris have indicated potential too with a growth rate of 6.4%.

France's population is growing and is said to reach 76 million by 2050<sup>38</sup>. Such expansion shadows a growth in the number of public buildings such as schools and hospitals. As a result, the potential in France is present. This is reflected in the non-housing construction market as a production rate increase<sup>39</sup> of 3% at the end of 2019.

# b. Funding

<sup>&</sup>lt;sup>34</sup> <u>https://www.insee.fr/fr/statistiques/3620894#graphique-figure2</u>

<sup>&</sup>lt;sup>35</sup> <u>https://www.statistiques.developpement-durable.gouv.fr/construction-de-locaux-resultats-fin-septembre-</u> 2019-france-entiere

<sup>&</sup>lt;sup>36</sup> <u>https://www.statistiques.developpement-durable.gouv.fr/publicationweb/230</u>.

<sup>&</sup>lt;sup>37</sup> <u>https://www.statistiques.developpement-durable.gouv.fr/publicationweb/230</u>

<sup>&</sup>lt;sup>38</sup> <u>https://www.thelocal.fr/20170626/what-you-need-to-know-about-frances-rising-population</u>

<sup>&</sup>lt;sup>39</sup> <u>https://group.atradius.com/publications/market-monitor-construction-france-2019.html</u>

The French government introduced an investment scheme to take place between 2018 and 2023. This five-year plan was put to execution in order to develop the country on multiple facets one of which was the construction sector, resulting in EUR 20 billion<sup>40</sup> being allocated to this industry. Additionally, further funds have been put forward from entities such as the European Investment Bank. This establishment delivered EUR 3.2 billion to France with the aim of developing construction projects.

c. Hotel development

A market that Acoustica knows very well is the hotel industry. As a result, growth of this section in France would represent a key opportunity for the company. Fortunately, this sector is growing at an exciting rate. According to the UNWTO (World Tourism Organisation), the number of tourists grew by 7% reaching 1.3 billion worldwide. For France alone, this represented 89 million people who visited the country in 2017, thus representing huge expansion potential. According to the Deloitte study<sup>41</sup>, between 2013 and 2017, the ten biggest metropolitan areas in France saw their number of hotel rooms grow from 84 100 to 87 300. This data is excluding the touristic hub of Paris. The graph<sup>42</sup> hereunder shows the expansion of hotels and rooms created in 2016, identifying the biggest potential in Paris.



Source : In Extenso TCH

d. Office Development

Office soundproofing is a large market in the acoustic industry. Growth in office construction will develop the related market and indicate a bright future for the selected company. According to the latest version of the "Grand Paris Office Crane Survey"<sup>43</sup> made by Deloitte during the summer of 2019, there lies huge potential in the country's capital. The following is a quote from the survey: "The construction activity in central Paris and the inner suburbs is at its historic level with more than

<sup>&</sup>lt;sup>40</sup> European Construction Sector Observatory p2

<sup>&</sup>lt;sup>41</sup> <u>https://www2.deloitte.com/fr/fr/pages/consumer-business/articles/tendances-tourisme-hotellerie-2018.html</u>

<sup>&</sup>lt;sup>42</sup> <u>https://www2.deloitte.com/fr/fr/pages/consumer-business/articles/tendances-tourisme-hotellerie-2018.html</u>

<sup>&</sup>lt;sup>43</sup> <u>https://www2.deloitte.com/fr/fr/pages/immobilier/articles/grand-paris-office-crane-survey-summer.html</u>

2 million square metres of new office space under construction, driven by new schemes at La Défense."



An estimated 20% of this figure is said to lie in Paris' business district called "la Défense". Even though other inner-city districts such as Paris Centre and the Western Business District have seen a decrease of 13% and 11% in volume of construction, the overall territory still shows promising development indicators. The north and east part of Paris is promising with neighbourhoods such as Seine-Saint-Denis holding a growth of 5% represented by 408 230 sqm of office construction. The upper graph<sup>44</sup> images the growth in potential. The values in blue indicate huge growth since 2011 indicating Paris as a clear targeted area for this project. The following graph<sup>45</sup> pictures the enlargement of office construction in the different areas in Paris. In a development scenario of Acoustica in Paris, this graph is useful as it highlights the importance to take into consideration fewer famous areas such as Seine-Saint-Denis.

<sup>&</sup>lt;sup>44</sup><u>https://www2.deloitte.com/fr/fr/pages/immobilier/articles/grand-paris-office-crane-survey-summer.html</u> P25

<sup>&</sup>lt;sup>45</sup> Same as previous, p27



Eté 2019 : surfaces de bureaux en chantier (en m<sup>2</sup>) - Summer 2019: office space under construction in sq m

Paris being the capital attracts the most projects in construction, however, other metropolitan areas in France are following the growth. Big cities such as Marseille have seen development projects. Indeed, there is an office project of more than 7000 sqm<sup>46</sup> that is said to be delivered by 2023 in the southern city. Additionally, recent trends in the office industry have pushed development, resulting in new projects such as the 8000 sqm<sup>47</sup> Whoorks coworking centre said to be delivered by early 2021 in the western city of Nantes. The image<sup>48</sup> that follows shows the listing of cities in terms of office rental search excluding Paris. This information comes from a study made by the office real estate website Bureauxlocaux. It is based upon the analysis of more than 3 million office real



estate searches. The outcomes are interesting and indicate potential for the office construction industry outside of Paris. The city of Lyon comes up as the most popular area in terms of office rental search with 23,4%. The cities that follow such as Nantes (11,5%), Marseille (11%), Toulouse (10,9%) and Bordeaux (9,3%) all show that opportunities are present all over the country.

Sources: Explore, Deloitte Real Estate Advisory Analysis

<sup>&</sup>lt;sup>46</sup> <u>https://www.tpbm-presse.com/marseille-trois-architectes-en-lice-pour-l-immeuble-de-bureaux-du-port-</u> 2826.html

<sup>&</sup>lt;sup>47</sup> https://www.ouest-france.fr/economie/entreprises/immobilier-de-bureaux-nantes-le-groupe-legendre-selance-dans-un-nouveau-concept-de-location-de-6409891

<sup>&</sup>lt;sup>48</sup> <u>https://blog.bureauxlocaux.com/barometre15-0</u>

#### **INDUSTRIAL SECTOR**

According to the European Commission's document "The future of Industry in Europe", France highly ranked in the industrial sector. With specialisations in the aerospace and automobile sector, it is not surprising that France is at an industrial stronghold today. This document also indicates that in 2014, Europe had 26 million active industrial enterprises. France was in second place with a staggering 3.6 million sector related companies in the country.

The graph<sup>49</sup> hereunder indicates the regional competitive index of all 28 member states. France is highly Ranked especially in its Parisian capital, thus indicating that strong infrastructure and innovation are present.



It is interesting to identify what lies ahead for the industrial sector in this country. The future is set to be promising with development plans that have already been started. The 34 sector-based initiatives are a key emphasis of this. This 10-year government-backed plan (2014-2024) has been launched to develop the industrial environment on many levels. According to McKensey, this plan to develop manufacturing represents the creation of 480 000 additional jobs in the 10-year period as well as an extra capital of EUR 45 billion.

<sup>&</sup>lt;sup>49</sup> <u>https://cor.europa.eu/en/engage/studies/Documents/The%20future%20of%20industry%20in%20Europe/future-of-industry.pdf P8</u>. Data dated of 2013

Such news is refreshing to hear as even though France is in a strong position in its industrial sector, the number of factories has diminished between 2009 and 2019. The Trendeo<sup>50</sup> observation study on employment and investment in France shows intriguing data.

The left side graph is entitled: "Creation and closing of factories in the different French regions". It also indicates the 2019 result. This shows that a shocking 2,210 factories have closed during the tenyear period but also that there have only been 17 closures in 2019.



However, the two maps show positive information. The left-hand map is entitled: "The industrial employment in 2009". The squares represent contract renewals and the green circles represent contract creations. It is clear to see the improvement as the right-hand side map indicates the same information but for the year 2019. This is partly due to on-site extensions as indicated in the graph below, entitled: "Share of industrial jobs created in industrial site extensions". This indicates that the need to protect personnel is growing.



<sup>&</sup>lt;sup>50</sup> <u>https://www.banquedesterritoires.fr/sites/default/files/2019-10/Trendeo%20-%202%20octobre%202019%20-%20De%20nouveaux%20param%C3%A8tres%20de%20l%27emploi%20%281%29.pdf</u>

#### TRANSPORTATION

a. Airborne Development

By analysing the company's portfolio, it is clear to see that the airborne soundproofing market is a niche in which Acoustica is well established. With products such as the Quietwave, the company has shown outstanding performances in that specific field. It is therefore attractive to identify any airborne development projects in the targeted country. France holds numerous airports spread out across the country. Indeed, there are more than 150 in the country.



The left-hand side graph<sup>51</sup> shows how dense the number of airports in France is. The purple indicators represent commercial airports used for air freight and the dark green indicators represent normal airports. Paris is the main hub in terms of activity and represents 52.1% of total activity. Even though the country seems congested, the right-hand side graph<sup>52</sup> indicates that development in airport infrastructure is inevitable. According to the ADB Group (Aéroport De Paris), airport traffic is set to double, going from 3.2 billion passengers in 2014 to 6 billion in 2025.

The capital has two large airports located within a 20 km radius of the city. There are large development projects in that area. By 2037, a new terminal will be created at the Roissy airport in Paris which represents an extra 40 million new passengers per year. This means that new passengers, new neighbouring communities as well as the population over where the new flight activity will take place that will need to be protected from noise pollution. Consequently, the new terminal will have a 36% increase<sup>53</sup> in flight activity. In other words, 1800 planes will be active on a daily basis compared to 1300 today.

<sup>&</sup>lt;sup>51</sup> https://www.aeroport.fr/uploads/documents/Manifeste\_UAF\_2017\_V11.pdf p10

<sup>&</sup>lt;sup>52</sup> https://www.parisaeroport.fr/docs/default-source/groupe-fichiers/presse/dossier-de-presse/15-10-13dossier-presse-connect-2020.pdf p 8

<sup>&</sup>lt;sup>53</sup> <u>https://www.francetvinfo.fr/societe/aeroport-de-roissy-la-construction-du-futur-terminal-t4-inquiete-les-riverains\_3186703.html</u>

New development plans are not specific to the Paris region. There is indeed an airport extension planned to be built by 2023 in the southern city of Marseille for the first phase. This phase is to create an extra heart to the airport in order to link the arrivals and departures. A second phase is planned to be delivered by 2027 which would add a new section to the airport consisting of 12 new aerobridges<sup>54</sup>. This phase has as objective to increase Marseille's airport capacity by 12 million passengers per year. According to BusinessTraveler<sup>55</sup>, this airport extension plan has seen backlash from the French Environmental Authority concerning aspects on noise, air quality and greenhouse gas emissions. Adding emphasis on these aspects is promising for Acoustica.

b. Road Development

A new motorway development is a massive project and can take anything between 10 to 15<sup>56</sup> years to be launched in France. Health and safety being a main cause of this long planning, new projects are considered key opportunities for Acoustica. An interesting data to know is how, and by who, these projects are launched. In fact, there are different methods of carrying out a major road project.

A public contracting authority can be at the head of such a project. In other words, public authorities finance them through a state region plan contract known in France as CPER. This CPER document basically ties the state and a region to commit to the funding of these major projects. For the period of 2015 and 2020, this represented EUR 6.84 billion in state share investment.

A public-private partnership (PPP) can be organised depending on the project requirements. There are two types of partnerships:

*Concession contracts* are applied for projects with a toll paying system. These contracts are distributed through competitive tender procedures that are decided at European level. The criteria that is used to identify which tender will be selected is the technical and environmental quality of the project (such as noise emotions), the level of tolls and the level of public assistance requested. Since 2001, this type of contracting has launched 9 motorway projects all over the country. The construction companies that are selected through the tender oversee design, project financing, constructing and maintaining the highway. They are allowed to do so and to receive toll payment for long periods of 40 to 80 years.

Partnership contracts are also launched in order to delegate the design, pre-financing and maintenance of the highway to a private partner. This partner will then receive a rent from the state during the time of the contract. Penalties can be applied if poor service is given. This type of contracting is less common. Since a toll system does not have to be established, these contracts are launched more rapidly. In 2013 was launched the first partnership contracted highway project in the southern city of Marseille.

There are currently 4 major PPP highway projects being constructed at this stage in France.

<sup>&</sup>lt;sup>54</sup> A jet bridge or aerobridge is an enclosed, movable connector which most commonly extends from an airport terminal gate to an airplane. (Phrase from Wikipedia).

<sup>&</sup>lt;sup>55</sup> <u>https://www.businesstraveller.com/business-travel/2019/08/08/marseille-airport-expansion-plan-criticised-by-french-environment-agency/</u>

<sup>&</sup>lt;sup>56</sup> <u>https://www.ecologique-solidaire.gouv.fr/grands-projets-routiers</u>

c. Railway Development

The country has a well-equipped railway and high-speed train network. The projects concerning these sectors are all managed by the Transport Infrastructure Department at the Ministry of the Environment, Energy and the Sea. This government entity finances, constructs and maintains the railway lines.

In October 2012, the "Mobility 21" Commission was developed in this entity. This is composed of parliamentarians and qualified persons, to specify the conditions for implementing the national transport infrastructure scheme (SNIT). This scheme detailed projects to be carried out over 25 years and estimated at more than EUR 245 billion, EUR 88 billion of which is covered by the state. This 2013 map<sup>57</sup> shows the priority projects and reported projects in the country.

https://www.ecologique-solidaire.gouv.fr/priorisation-des-nouvelles-infrastructures-transportcommission-mobilite-21



# PROJETS PRIORITAIRES ET PROJETS REPORTÉS

In 2018, the National Infrastructure Council (COI) published a report<sup>58</sup> that provided three investments scenarios for the next 20 years. These scenarios all had a common priority for daily transport, congestion reduction in large cities and road access to medium-sized cities. A reassuring EUR 15 million to EUR 20 million budget would be invested in railway projects to managed noise. This amount will be covered by the AFITF (public entity that ensures funding pf transport projects in France). The next page graph<sup>59</sup> indicates what these scenarios mean on a geographical level.

 <sup>&</sup>lt;sup>57</sup> <u>https://www.usinenouvelle.com/article/infrastructures-les-choix-de-la-commission-mobilite-21.N199468</u>
 <u>https://www.ecologique-</u>

solidaire.gouv.fr/sites/default/files/2018.02.01 synthese rapport conseil d orientation des infrastructures 0.pdf

<sup>&</sup>lt;sup>59</sup> <u>https://www.lalsace.fr/actualite/2018/02/02/priorite-au-train-train-quotidien</u>



## **KEY MARKET FIGURES**



**19.6%** equals the increase of the number of broad construction companies in France between 2010 and 2016.<sup>60</sup>

**10%** represents the part of the industrial sector in the French 2016 GDP. This represents a turnover of EUR 870 billion. <sup>61</sup>

18% equals the place that the transport sector occupies in the French 2019 GDP (EUR 402 billion).<sup>62</sup>

<sup>&</sup>lt;sup>60</sup> <u>https://ec.europa.eu/growth/sectors/construction/observatory\_en</u>

<sup>&</sup>lt;sup>61</sup> <u>https://www.economie.gouv.fr/entreprises/chiffres-cles-industrie</u>

<sup>&</sup>lt;sup>62</sup> <u>https://www.jobtransport.com/actualites/transport/les-chiffres-du-transport-2019-emploi-economie-developpement-pour-tout-savoir-cest-ici/</u>

# Legal framework

Any regulation regarding noise will be perceived as encouraging for Acoustica's development and therefore be interesting to analyse. This part of the project will be divided into subcategories. The first aspect will identify any key laws that are or will be implemented to limit noise. The following category will help to view the required certifications needed to penetrate France. Finally, an incentive section will be presented to help discover possible financial help Acoustica could benefit from.

#### NOISE RESTRICTION

A major legal amendment concerning noise restriction law took place recently in France. A key importance to combat any pollution is to change the public and political eye concerning its nuisance. The adoption of the **amendment N°CD1784**<sup>63</sup> is a great step to do so. The regulation that was publicly accepted in June 2019 enabled noise pollution to be in scripted in French law and legally recognised as important as air pollution due to its worrying effects on public health. Air pollution will no longer be seen as a simple nuisance but as an environmental threat.

On a larger scale, the EU is continuously trying to improve the life quality of its citizens. One of the main programs put in place to do so is the **European Environment Action Program**<sup>64</sup>. Targeted for the end of 2020, this plan aims to tackle environmental nuisances on a wide scope. The EU hopes to better implement legislation and information in the aim to protect the Union's nature and inhabitants. Concerning noise pollution, the target is to get closer to the World Health Organisation's recommended levels of 40dB<sup>65</sup> for night noise.

Currently, there is a noise tax related to the airborne environment in France. The **TNSA** is applied on 9 of the busiest airports in the country. It ranges between 2-35<sup>66</sup> euros per aircraft departure. This tax is helping to develop the acoustical industry in the country through programs such as the PGS Nantes-Atlantique 2019<sup>67</sup> which is set to take place in July 2020 and will help to soundproof over 7 000 homes located close to the airport.

Concerning construction, the **n° 2010788 law**<sup>68</sup> implemented in 2010 imposes that any new building or construction be presented with an acoustical attestation. Such attestation will have to confirm if the new building is aligned with the country's noise regulation. This regulation is categorised by type of noise<sup>69</sup>. There is also a differentiation between new and old construction. For airborne noise this represents 53-58 dB and 58-65 dB for impact noise. Exterior noise regulation is set between 30-45 dB. In comparison with other European countries, France is aligned with airborne noise restriction. Concerning the impact noise regulation, France is seen as having a difference of 3

<sup>&</sup>lt;sup>63</sup> <u>http://www.assemblee-nationale.fr/dyn/15/amendements/1831/CION-DVP/CD1784</u>

<sup>&</sup>lt;sup>64</sup> <u>https://ec.europa.eu/environment/action-programme/index.htm</u>

<sup>&</sup>lt;sup>65</sup> <u>https://ec.europa.eu/environment/integration/research/newsalert/pdf/202na3\_en.pdf</u>

<sup>&</sup>lt;sup>66</sup> <u>https://www.fccaviation.com/regulation/france/noise-tax</u>

<sup>&</sup>lt;sup>67</sup> <u>http://www.loire-atlantique.gouv.fr/Politiques-publiques/Grands-projets/Aeroport-Nantes-Atlantique/Plan-</u> <u>de-gene-sonore-PGS/PGS-2019</u>

<sup>&</sup>lt;sup>68</sup> <u>https://www.ecologique-solidaire.gouv.fr/sites/default/files/Guide%20d%27accompagnement%20-</u> %20Comprendre%20et%20g%C3%A9rer%20l%27attestation%20acoustique%20-%20janvier%202014.pdf p4

<sup>&</sup>lt;sup>69</sup> (explained in p17)

dB and could be subject to a stricter development to regulate this noise to 55dB<sup>70</sup>. (Verify if needed to explain this change in acoustical regulation cost would represent 1.6 -2 euro per SQM)

A further law was developed in 2003 for other types of buildings such as schools, health centres or hotels. This specific law implemented 3 norms to ensure acoustical protection. The NF EN ISO 717-2 norm ensures the use of sound proofing material to protect from outside noise. The NF S 31-057 norm assures protection of inside noise due to equipment and the NF EN ISO 11654 norm ensures an overall acoustical absorption for the building (in case of impact noise).

#### CERTIFICATION

The soundproofing industry being wide and complex, is subject to numerous certifications that are required to penetrate the French market. Concerning this industry, the main governmental actor is the CTSB<sup>71</sup>. This entity requires new acoustic companies to pass mechanical, pressure and fire testing in order to propose their products in France. These tests can be costly in expenses and in time. They may take between 4 and 15 months to process and cost 10 000 to 25 000 EU for a first certificate demand<sup>72</sup>. The acoustical test is not imposed legally ,however, it will be crucial for technical and marketing reasons. Through the CSTB organisation, the company will be able to receive the CE mark required for product development in Europe.

The CSTB will also deliver an environmental certification for any eco friendly innovative products. Such aggregation would help promote Acoustica on a national and European level.

## INCENTIVES

It is a common misperception that home acoustic well-being is only available for the upper classes. Fortunately, several organisations in France propose financial helps to ensure that less fortunate individuals live in a sound proofed environment. The government aligned with the 10 biggest airports in France propose an aide for sound proofing for close airport housing. This aid ranges from EU 2000/room for apartments to EU 3500/room for houses<sup>73</sup>. A following governmental organisation will help individuals for the renovation of their housing. The ANHA (Agence National de l'Habitat) will help pay any reconstruction concerning energy saving and sound insulation if the individual meets the requirements<sup>74</sup>.

There are limited yet attractive incentives that Acoustica could benefit from. An example of this is the EMDG<sup>75</sup>. The Export Market Development Grant is giving by the Australian government to national companies willing to develop their offer overseas. Once selected through the application process, companies may benefit from a reimbursement of 50% of their promotional expenses to a maximum of AUD 150 000. Such expenses may include overseas representation, marketing consultancy, free samples or insurance of eligible intellectual property.

<sup>&</sup>lt;sup>71</sup> <u>https://evaluation.cstb.fr/fr/certifications-produits-services/produit/isolant-en-polyurethanne-projete-in-</u> <u>situ/</u>

<sup>72</sup> http://www.ccfat.fr/demander-atec/

<sup>&</sup>lt;sup>73</sup> <u>https://www.service-public.fr/particuliers/vosdroits/F1702</u>

<sup>&</sup>lt;sup>74</sup> https://www.anah.fr/

<sup>&</sup>lt;sup>75</sup> <u>https://www.business.gov.au/grants-and-programs/export-market-development-grants-emdg</u>

# Competitors analysis

Understanding the current competitive environment in France is crucial for such a project. This part of the project will be subdivided into specific categories. Firstly, there will be a listing and description of acoustic products manufacturers in order to give the reader a key vision on the various acoustical products and services available in the country. Following this will be a mind map to help position the actors of the market. Furthermore, a graph will help compare the foreign products with Acoustica's offer. An important note at this stage of the analysis is that it is concentrated on direct competition. As a result, all thermal insulation companies that may have some degree of acoustic protection have not been considered.

After numerous researches on the matter, it has been observed that French national competition is quite diverse. Each actor has specialised their offer in order to cover a niche in the acoustic market. Some may have more infrastructure than others but may be considered less jeopardising for Acoustica. A competitive level colour<sup>76</sup> will be allocated to the various actors to help better identify the risk level they represent for the business expansion. *This colour holds as factors, portfolio and application similarity.* 



ID card:

Location	Ensisheim, north-east of France
Years Active	+30 years
Expertise	Building & Industrial sector (Specialised in Latex)
Size (in France)	10-19 Workforce €2.5 million (2017)
Promotion	Website and Facebook
Competitive Level	

Sempatap is specialised in the building and industrial sector. With over 30 years of experience, this company has shown positive results as the company made a EUR 2.5 million turnover in 2017. Their Wraptech latex foam is present in all their products. With this, they claim to be experts in low-thickness insulation.

The company has a costumer hotline cold Prekopro which basically acts as an acoustic consultant to identify the client's need and to see which of their product would match the costumer's requirements. They are also on the constant lookout to find key partnerships on all business levels (procurement, marketing and sales) in France and abroad. The company holds distributors worldwide and offers turnkey solutions.

The company has a well-designed website and a Facebook page (last post in July 2018)

<sup>&</sup>lt;sup>76</sup> Red being highly competitive and therefor a potential risk. Green being less competitive and therefor showing no commercial danger.



Location	Lyon, east of France
Years Active	20 years
Expertise	Transport & Industrial sector
Size	5 Workforce €2 million (2015)
Promotion	Website
Competitive level	

Triangle-Insonorisation is located 30 km from Lyon city. This company specialises in the building and transport sector. They have accomplished projects in the automotive industrial area as well as the railway sector. Their portfolio products are mainly composed of latex, melamine foam and bitumen.

The company has been operating for 20 years. All their operations are in France.

The company has basic straightforward webpage with a simple contact fill in form section.

# 3. Decibel France

ID card:

Location	Lyon, eastern France
Years Active	21 years
Expertise	Transport, Building & Industrial sector They have an acoustic lab to provide turnkey solutions.
Size	20-30 Workforce €10.3 million (2018)
Promotion	Website, Facebook
Competitive Level	

Decibel France holds more than 20 years expertise in the acoustical field. They have had projects in all 3 targeted sectors. They are also located in the east part of France and in Belgium. This company holds an acoustic lab where they test their own products. The company employs an acoustical engineer that allows them to provide turnkey solutions and match the costumer's needs. Their products are all thicker than 10mm.

The company's website is complete with a contact form as well as a newsletter section. They also own a Facebook page (last post May 2019).

Their operations are mainly in France and they hold a strong sales team of 20 people.



# Id Card:

Location	Saint Etienne, east of France
Years Active	14 years
Expertise	Building & Industrial
Size	5 Workforce €1.9 million (2015)
Promotion	Website
Competitive Level	

Solutions Elastomères is located north of Lyon. They have been operating for nearly 15 years mainly targeting the building and industrial sector. This company has a diverse product portfolio.

SE is part of a group called PAUL. Through this group, they benefit of a 4000 m<sup>2</sup> warehouse as well as a second production unit in Marocco. Standard delivery takes them 48H and 1-3 weeks for personalised products.

The company has an attractive website and has promoted its brand through French television in the past. The company only operates in France.

5. Eurocoustic (SaintGobain<sup>77</sup>) **eur** coustic

ID Card:

Location	Production and head office in Genouillac (Creuse) Senior management and sales in Paris La
	Défense.
Years Active	14 years
Expertise	Building & Industrial Thermal, acoustic and fire protection
Size	200 Workforce €76 (2018)
Promotion	Website & tutorial videos on Youtube
Competitive Level	

Eurocoustic is part of the French construction giant called Saint Gobain. This manufacturing multinationals holds various European construction companies.

Eurocoustic employs 200 people across their two sites. The production unit is in Genouillac which is in the central part of France and a sales and management unit in the Parisian business area of La Défense.

They operate nationally and have a vast international network with over 9000 orders fulfilled each year.

<sup>&</sup>lt;sup>77</sup> Eurocoustic is part of the Saint-Gobain Group, one of the world's largest and oldest building products companies, which is present in 67 countries with more than 170 000 employees.

Even though the company is part of such a large and imposing group, they will not be considered as dangerous competitors as they specialise in ceiling acoustic. Their products are mainly composed of wool therefor Acoustica will not intrude on their market share.

6. Eurisol eurizol

ID Card:

Website	https://www.eurisol.net/fr/
Location	Paris region, France.
Years Active	16 Years
Expertise	Thermal Insulation-fire protection-acoustics
Size	10 (Workforce) € 12 million (Turnover 2018)
Promotion	Website only
Info received from contact	<ul> <li>Their client base is only national. (Big projects such as football stadiums or commercial centres).</li> <li>They do not have an installing team only based on production and resale.</li> </ul>
Competitive level	

This Parisian company has been operating for over 15 years in the thermal, acoustic insulation and fire protection sector. It has positioned itself in a comfortable place in the larger projects market. Such projects include stadiums, shopping centres, ...

However, Eurisol has a limited portfolio of two products concerning sound protection. Thus, the competitive level of this firm is not dangerous.

The firm only operates nationally and delivers the products without an installing option.

# 7. Smac SMAC

ID Card:

Website	https://www.smac-sas.com/en
Location	Toulon, France.
Years Active	15 years
Expertise	Transportation sector aeronautical, space & industrial
Size	45 (Workforce) € 6.4 million (Turnover 2018)
Promotion	Website only
Competitive Level	

Smac is part of a large multinational group called Montblanc. This group specialises in high-end protection of machinery, ships and aircrafts.

Smac has a portfolio of 3 acoustic protection products that target the space, aviation and defence markets. The company operates all over the world with multiple research laboratories and business entities.

This firm targeting their highly niche markets in the acoustic industry does not jeopardise this project.

Positioning map:





Criteria	Acoustica	Rubber and Bitumen	Plaster	Mineral Wool	Plant based wool
Acoustic performance	✓ (+10 dB)	✓ (+5dB)	✓ (min 2 boards)	×	×
Thickness	🗸 (3mm)	<ul> <li>✓</li> </ul>	<b>×</b> (13mm)	<b>×</b> (50mm)	<b>×</b> (50mm)
Antivibration	$\checkmark$	$\checkmark$	×	×	×
Emissions	🗸 (zero)	×	×(dust)	×(fibres)	×(fibres)
Durability	$\checkmark$	*	×	×	$\checkmark$
Recyclable	$\checkmark$	×	$\checkmark$	×	$\checkmark$
Production	<ul><li>✓ (-80%)</li></ul>	×	×	×	✓
energy					
Fire	✓ (+60min)	×	$\checkmark$	$\checkmark$	×
protection					

# SWOT

Strengths	Weaknesses		
<ul> <li>Team members speak fluent French</li> <li>Experience exporting</li> <li>Trusted global logistic partner</li> <li>Large production capacity</li> </ul>	<ul> <li>First time dealing with the French market</li> <li>No employee to send to France</li> </ul>		
<ul> <li>Opportunities</li> <li>Targeted sectors have promising future</li> <li>Law in favour of acoustic protection</li> <li>Australian government backed incentives</li> </ul>	Threats <ul> <li>Presence of direct competition</li> <li>Stronger currency in France</li> </ul>		

## - Strengths:

**Team members speak fluent French.** The CEO of Acoustica as well as two others team members speak French fluently. This is highly valuable as according to the Eurobarometer of 2012, only 39%<sup>78</sup> of French nationals have a good level of English. Thus, a good level of French will be an advantage to conduct business in France

**Experience exporting.** Acoustica's products can be found in many foreign countries. Patented and adapted to specific markets, the company has knowledge of how to penetrate new lands.

**Trusted global logistics company.** The company has been operating efficiently so far by subcontracting its logistics. All of this tends to demonstrate that this partner can be trusted for dealing with European markets.

<sup>&</sup>lt;sup>78</sup> <u>https://frenchtogether.com/french-speak-english/</u>

**Large production capacity.** As explained in previous sections, production is currently running at 30%. More than two thirds of production can be allocated to the project. Even if this huge share would not be enough, the capacity can be multiplied by adding a manufacturing shift.

- Weaknesses:

**First time dealing with the French market.** Even though the company has experience in Europe and holds a good level of French, it will be their first time dealing with France. With new markets comes new surprises. The content of this report and further investigation will help minimise these revelations.

**No employee to send to France.** Acoustica has a limited number of staff. The need to either employ a new member for French business development in Australia or hire a local business representative in France might be necessary.

- Opportunities

**Targeted sectors have promising future.** After analysing the market potential section, the building, industrial and transport sectors are all flourishing. However, some may be easier to reach. This will be enhanced in development stage.

**Law in favour of acoustic protection.** The previous analysis has shown more pressure from national and European entities to protect the population from noise pollution. As explained previously, this aspect is not only felt by higher commissions but by the people themselves as they consider sound quality to be as important as air quality.

**Australian government backed incentives.** Having the opportunity to receive aid from the Australian government is a huge step forward. As explained in the legal framework under incentives, this project could receive a reduction of 50% of its promotion costs as well as export aid and advice if needed.

- Threats

**Presence of direct competition**. The competitor analysis has identified two direct competitors that offer similar products than Acoustica. This represents the biggest threat for this project. The need to identify key factors in order to differentiate from them will be crucial. Such factors could be pricing, delivery, marketing, ...

**Stronger currency in France** does represent an extra risk for any export. However, this risk represents extra profit opportunity.
# Forms of Implementation

This section represents the key insight to the project. Four business scenarios will be developed in order to identify the advantages and disadvantages they represent for Acoustica. Following this, will be a part allocated to the identification of key partnerships needed in both set-ups. The development strategy will then select which product of the company's portfolio would match the French market's needs.

## Scenario 1: Direct Export

This export scenario is how Acoustica has been developing itself in foreign markets. They usually operate with direct final clients. The logistic side is outsourced through the service of shipping agents and is generally at the responsibility of the final client. As a result, the most common incoterm used is Ex Works<sup>79</sup>.



Advantages	Disadvantages
No presence of intermediary	Harder to deliver after sales service
Full control of marketing	Additional Order Risk
Direct link with Client	Irregular Sales

Logistics:

Cost of transport & customs for a 7m <sup>2</sup> pallet of QuietWave	EUR 912.66 <sup>80</sup>
Price of QuietWave for 7m2	EUR 13.77 <sup>81</sup>
Total resell price	EUR <b>132.34</b>

<sup>&</sup>lt;sup>79</sup> See details of this incoterm in "Annex 1"

<sup>&</sup>lt;sup>80</sup> Full cost details in "Annex 3"

<sup>&</sup>lt;sup>81</sup> Acoustica Price list in "Annex 4"

Cost of transport & customs for a 20ft dry container (32m <sup>2</sup> )	EUR 2171.49 <sup>82</sup>
Price of Quietwave for 7m2	EUR 13.77
Total resale price	EUR <b>70.86</b>

 $\rightarrow$  Even if the negotiated incoterm is EXW, it is clear to see that this type of export will be used for larger scaled projects based upon the logistical costs being cut down by nearly 50 % for a shipment of a 20ft dry container compared with a simple pallet.

## Scenario 2: Indirect Export

In the past, Acoustica has used this development scenario. They locate key local distributors and wholesalers to promote their brand. The resale price is of course lower than direct export but on the other hand, this technique comes with further sales coverage.



Advantages	Disadvantages
Stock possibility	Lower control on sales service
Risk transfer to distributor	Lower margins
Order & administrative simplification	Risk of choosing wrong distributor

<sup>&</sup>lt;sup>82</sup> Cost detail in "Annex 5"

## Sales & Promo Tree



## **Key Contacts**

• Distributors:

Distributors and DIY shops that sell acoustical products are present all over the country. They usually operate with a profit margin of 20-25%. The margin generally varies in negotiations depending on who manages the marketing of products. Hereunder are potential distributors that have been selected for their geographical coverage of the country. The distributors will then resell the products to smaller entities such as renovators or building sub-contractors.

### 1. Serac Distributions

Location	50 km north of Paris
Market	Industrial & Construction (B2B & B2C)
Comment	This company also has a noise consulting firm dedicated to the transport and B2B building sector
Contact	contact@seracdistribution.com 01 60 86 43 19
Website	https://seracdistribution.com/

### 2. Access Protec

Location	Lille, north of France
Market	Construction B2B
Comment	Part of a group that specialises in concrete constructions
Contact	commercial@accessprotec.fr 03.20.98.20.53
Website	https://accessprotec.fr/le-groupe/

3. All Insul

Location	Paris
Market	Construction – Industrial - Transport
Comment	Thermal and acoustic insulation
Contact	service.client@all-insul.com
	+33 (0)6 19 44 36 93
Website	http://all-insul.com/

### 4. Matériaux Biologiques Constructions

Location	Toulouse, South of France
Market	Construction B2B B2C
Comment	They only deal with green products
Contact	info@mbctoulouse.com
	05 61 47 07 66
Website	http://www.materiauxbioconstruction.com/

## • Construction Companies

These key actors will play a crucial step in Acoustica's development. With construction companies, the relationship will be based upon direct export. The following contacts specialise in each of the market's sectors. Logistic responsibility will be on a case-by-case basis depending on the negotiated incoterm.

1.	ARS	France
	-	

Location	Bordeaux, north west France
Market	Housing
Comment	Construction and renovation of villas and apartments
Contact	+33 6 50 77 09 63
Website	https://arsfrance.com/nos-realisations- construction-renovation/

2. Aximum

Location	All over France
Market	Transport
Comment	Specialised in motorways
Contact	+33 (0)2 47 88 16 00
Website	http://www.aximum.fr/en
3. Bateg	

Location	Paris region
Market	Businesses/Industrial
Comment	Part of Vinci, France's largest construction company.
Contact	+33) 1 41 28 23 00
Website	https://www.bateg.fr/

## • Suppliers / Manufacturers

The suppliers differ from the distributors as they generally operate alongside an acoustics consulting firm and the construction companies. They deal with larger scale projects in the transport or industrial sector.

#### 1. F2A

Location	Lyon
Market	Industrial Sector
Comment	Specialises in ventilation and acoustic projects
Contact	<u>04 78 06 54 72</u>
Website	https://www.f2a.fr/

#### 2. Trèves

Location	Locations worldwide. Paris region.
Market	Transport sector (automotive sector)
Comment	Specialises in the acoustic interior
Contact	<u>+33 1 44 35 30 30</u>
Website	https://www.treves-group.com/

#### 3. Ades Technologies

Location	St Etienne,
Market	Transport sector (railway components)
Comment	Worldwide activity
Contact	pl@ades-technologies.com +33 (0) 4 77 59 44 23
Website	http://www.ades- technologies.com/en/index.php

4. Seimi

Location	Brest, North West France
Market	Transport sector (marine equipment)
Comment	Leader in naval components
Contact	<u>info@seimi.com</u> +33 (0)2 98 46 11 02
Website	https://www.seimi-equipements-marine.com/
5. Safran	

Location	All over France
Market	Transport (Aerospace)
Comment	Space – Defence - Aviation
Contact	(33) 1 40 60 80 80
Website	https://www.safran-group.com/

## • Architects/ Engineers/ Acousticians

For small-scale projects such as housing or medium-sized offices, an architect, engineer or acoustician may be contracted to manage the acoustic specifications. These professionals therefore represent a promotional aspect to a manufacturer like Acoustica as they will decide which product or company to promote to the renovator or building sub-contractor.

Architects		
Frédérik Adamzik	06.73.39.01.13	Lille (North of France)
B&B Architects	01.58.88.39.90	Paris
Eric Millet	0662373048	Marseille
Acoustic Engineers/ Acousticians		
Acapella	alain.delannoy@acapella.fr +33328368336	Lille (North of France)
Atelier independent acoustique	aida-acoustique@wanadoo.fr +33238248042	Cinov (North of France)
Romain leBlanc	contact@oxalys-acoustique.com	Paris
Christophe Cella	https://www.christophecella.com/ (+33) 06.24.94.53.70	Paris
AFL	CONTACT@AFLCONSEIL.FR +33683516380	Paris

Bruno Costedoat	becostedoat@free.fr +33561746960	Toulouse
Acoustique Gamba	www.gamba-acoustique.fr	Marseille

## • Consulting Firms:

Sound consulting firms most generally conclude large-scale projects. These entities, composed of sound technicians, will be required to consult on building sites such as airports or shopping malls. They will also act as a promoter for a sound insulation company by advising the construction company or supplier which product should be used to guarantee sound optimisation for the specific project.

1. Lasa

Location	Present in all major cities in France
Market	Construction – Industrial - Transport
Comment	40 years exp. Highly oriented towards r&d.
Contact	<u>contact@lasa.fr</u> +33 (0) 1 43 13 34 00
Website	https://www.lasa.fr/en/accueil-english/

### 2. Slam Acoustique

Location	Present in all major cities in France
Market	Construction – Industrial - Transport
Comment	
Contact	contact@slam-acoustique.com +33 (0) 6 26 70 22 39
Website	http://www.slam-acoustique.com/

3. Orféa

Location	Present in all major cities in France
Market	Construction- Industrial - Transport
Comment	
Contact	agence.paris@orfea-acoustique.com
	01 55 06 04 87
Website	https://www.orfea-acoustique.com/

### 4. AC Acoustique Conseil

Location	Present in all major cities in France
Market	Construction – Industrial - Transport

Comment	
Contact	contact@acoustique-conseil.com +33 (0)1 47 08 52 52
Website	http://www.acoustique-conseil.com/

## Scenario 3: Building a foreign entity

Being the most controlled oriented foreign development option, this could be interesting for the company to consider in the future. Once sales have shown to be promising in France, only then could Acoustica decide to open a subsidiary.

	Australia	France
Average cost of an employee	EUR 31 708 / year <sup>83</sup>	EUR 51 000 / Year <sup>84</sup>
Average commercial rent	EUR 615/ sqm <sup>85</sup> (Sydney)	EUR 10 105 / sqm <sup>86</sup> (Paris)

A basic workforce and property cost comparison indicates the high costs in France. Rent prices are much lower outside the capital but market attractiveness is the highest in Paris.

## Scenario 4: Intellectual property letting



This scenario has the potential to transform competition in clientele. A supplier might need to expand its product portfolio. They may do this by producing some of Acoustica's products. In exchange of this, the client will pay a commission or percentage to Acoustica for the use of the selected patent. This is case per case and specifications will need to be negotiated. Most commonly it involves white labelling. Acoustica has developed this kind of contracting in past with a client in Belgium. The client produces the Quietwave product and pays a margin on the profit made through sales.

<sup>&</sup>lt;sup>83</sup> <u>https://www.payscale.com/research/AU/Job=Factory\_Worker/Hourly\_Rate</u>

<sup>&</sup>lt;sup>84</sup> https://www.insee.fr/fr/statistiques/1371004

<sup>&</sup>lt;sup>85</sup> https://www.commercialrealestate.com.au/advice/how-much-does-it-cost-to-rent-office-space-57245/

<sup>&</sup>lt;sup>86</sup> <u>https://www.bureauxlocaux.com/prix-marche/bureaux</u>

1) Promotion in France will be developed through alliances with architects and consulting firms mentioned in the previous section. However, additional advertising will always be welcomed. Non-profit organisations such as **Qualitel** represent a huge boost for Acoustica's expansion. Qualitel is an association that promotes wellbeing and comfort in the housing industry. Since the 70's, this group has helped secure thousands of homes by giving free advice and consulting concerning energy and noise control.

Website	https://www.qualitel.org/
Contact	info@qualitel.org
Location	Paris

- 2) Creating a **French website version** will be necessary. Even though translators are just a click away, having a ".fr" version will add trust and a sense of proximity for French distributors and final clients.
- 3) The brand and logo will require to be trademarked.
- 4) After analysing the market through the competitor's environment, the project recommends that Acoustica focuses on their **Quietwave**, **Acoustiflex**, **Angelstep** and **Greenlag** products. These products have been highlighted as a perfect fit for the French market since they are not matched in the competitor's portfolios. Competition may have similar products, but thickness and acoustic protection levels aren't equalled.
- 5) The competitors section also helped to identify that delivery time is important. Export scenario 1 represents a minimum **of 45 days delivery**. As a result, scenario 2 is recommended for the launch of the project. Passing through distributors will enable stock options and reduce delivery times.
- 6) The subscription to the Australian **EDMG** government grant for export will be beneficial for Acoustica and help lower foreign expenditure.
- 7) The hiring of a **commercial representative** in France will be favourable and more cost effective than sending Australian based personnel.
- 8) When observing local competition, there is very little invested in social media presence. Seeing as Acoustica is only slightly present on social media, a further development of this aspect could be beneficial. An **Instagram media campaign** with before and after videos that could be linked to the ".fr" website would help promote the brand.

- 9) The **green trend** is highly popular in France. More and more clientele and therefore projects include a green effective offer. Consequently, the green version of Acoustica's products such as the quietwave will be adequate to the French market.
- 10) The information present in this project has been gathered during the **pre-corona period**. The impact on the acoustic industry is hard to determine. Consequently, time will have to be the main tool to fix the issue. Following the recent events such as the Australian fires and the pandemic, Acoustica might require strengthening itself before embarking on a foreign expansion.

## Porter 5 Forces

In order to conclude the project, the porter 5 forces graph will be developed hereunder. This will help summarise the different pressure points that the French market holds on Acoustica's products. A colour code is used to identify the pressure intensity (red represents high, orange medium and green low).



The pressure exerted by the **threat of new entry** is considered medium level. A reassuring point is that there are numerous entry barriers for a company specialising in the same market. Aspects such as word of mouth being important for the promotion of products through architects and consulting firms indicates the importance of market reputation. Resulting as a positive point for Acoustica which has provided a high level of service for a considerable number of years. However, a European based company will have further ease for integration.

Another medium levelled pressure point is **buyer power**. The positive feature of this is that there are many diversified clients with different negotiating power. On other hand, the cost of supplier change for a client is low. Thus, customer service excellence must be reached.

The most pressured point in the porter analysis is the **threat of substitute**. Although the substitutes have less acoustical performances, there are numerous types of products that can, to a certain degree, replace sound insulation. In the past, most construction materials were used to protect the sound nuisance feature of a building. After analysing the legal development of this, the project can reassuringly predict that substitutes will pose less threat in the coming years due to emphasis on noise restriction laws in Europe and France.

Raw materials used for producing Acoustica's products being common lightens the pressure exerted by **supplier power**. The only unfavourable aspect of this section might be the long distancing caused by the location of Chinese suppliers.

Through the analysis of the competition, it is apparent that the French market holds strong and powerful entities. However, these actors seem more diversified between acoustic and thermal insulation. Such diversification has proved to hinder specialisation. Thus, representing an opportunity for Acoustica to be part of a niche construction market only dedicated to an acoustic offer. Most products on the market were targeting impact noise. The company has an offer covering this type of nuisance as well as airborne and installation noise. Acoustica having proved their excellence in innovation through numerous prizes and awards, encourages the fact that research and development is a crucial feature in the sound insulation market. As a consequence, this lowers the threat of **competitive rivalry**.

It is now clear that the overall prediction for the international expansion in France constitutes a <u>green light</u>. However, it is recommended to develop the company through Scenario 2 and 4. Only after substantial results in these options, will the company be able to start analysing if the creation of a foreign subsidiary is feasible.

The tools given in this project such as the sales tree, key contacts and the recommendations will prove to be of high use for the development, however, a continuous up-to-date knowledge of project tenders will be crucial. As a result, strong lies with acousticians and consulting firms will need to be forged. As explained previously, networking will have to be developed prior to the expansion. Thus, it will be necessary for Acoustica to go to France and meet stakeholders in the acoustical field through events such as trade fairs and forums. Being seen and heard is key to finding a position in France.

I would like to personally thank you for your attention and invite you to read the following appendices if further clarification is needed.

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- Phone
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# **Appendices**

### Annex A: IncotermList



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## Annex B: France Country Profile

Time (days) Cost (% of Income per capita) Reliability of supply and transparency of tariff index (0-8) Registering Property (nnik) Score of registering property (0-100) Procedures (number) Time (days) Cost (% of property value) Quality of the land administration index (0-30)

Postfiling index (0-100)

-00

63.3

42

7.3

24.0

92.4

Resolving Insolvency (rank)

Time (years)

Cost (% of estate)

Score of resolving insolvency (0-100)

Outcome (0 as piecemeal sale and 1 as going concern)

Strength of insolvency framework index (0-16)

Recovery rate (cents on the dollar)

83

26

74.6

74.8

1.9

9.0

1

11.0

## Annexe C : Logistics Invoice 1 Pallet

For, Charles Millgate Acous charliemillgate@yahoo.com



QT2220273845 Issue Date : May 19, 2020 Quote valid until : June 2, 2020 Estimated transit time : 51 Days

**Ocean Freight Quote** 

Transport Mode	: Ocean	Origin City	: Sydney		Destination Cit	ty :	Paris
Movement Type	: Door to doo	r Loading Port	: Sydney		Discharge Port	t :	Le Havre
CO2 Emission	: 6.367 KG	Zip/Postal Code	: 2000		Zip/Postal Cod	le :	75807
Cargo Deta	ils						
Quantity	1	Package Type	Dimension(	L*W*H)	Per Piece		Gross Weight
1	F	Pallets	540 x 120 x	30 CM	17.00 Kilograms		17.00 Kilograms
				14-1			
Total Gross	Weight	Total Cubic Meters	Revenue To	on	Insurance Include	d	Cargo Value
17.00 (Kgs)		1.9440 (m3)	1.94		-	à	-
Item Descrip	otion						
Insulation							
Origin Char	ges						EUR 155.74
Charge Nam	ie						Total Price
Agency Fee	)						47.71
BL Fee	0						8.95
Inland Fuel	Surcharge						6.80
ISPS Bick Up Ch	01000						14.91
Pick-Up Chi	arges						5.90
SOLAS/VG	M Administrati	on/Processing Fees					14 91
SOLASIVG	Administrati	on/Processing Pees					14.01
Internationa	al Charges						EUR 111.92
Charge Nam	ie						Total Price
Bunker Tran	nsitioning Cha	rge					4.48
Oceanfreigh	nt						107.44
Destination	Charges						EUR 645.00
Charge Nam	le						Total Price
CFS Charge	es		1.1				215.00
Delivery Ch	arges						250.00
Documenta	tion						170.00
ISPS							10.00
			[	Grand Total			EUR 912 66

## Annex D: Acoustica's Price List

ACOUSTICA Pty Ltd - JANUARY 2019 PRICE LIST [GST and Freight Costs EXCLUDED]									US uiet Al	ustr	<b>ca</b> ® alian
ACOUSTICA PRODUCTS	DESCRIPTION	PACK	<u>WEIGHT</u>	<u>Max</u> <u>Per/Pallet</u>	<u>L x W (m)</u>	<u>M2</u>	TR/ m2	ADE Pack	R m2	ETAIL	Pack
CONTACT ACOUSTICA SALES MANAGER FOR HIGH VOLUME OR ONGOING ORDERS PRICE OFFER FLEXIBLE NOISE BARRIERS PLASTERROARD SYSTEM MEMBRANE								Roll			Roll
QuietWave membrane	1.2mm/ 1.5 to 2kg	Roll	17kg	48	1.3 x 5.4	7.02	\$ 22.96	\$ 161.20	\$ 28.37	\$	199.16
CurtainWave SQ25	1.2mm/ 2.5kg MOQ and LEAD TIME TBC	Roll	17kg	48	1.3 x 5.4	7.02	\$ 28.14	\$ 197.54	\$ 34.77	\$	244.05
MASS LOADED FLEXIBLE NOISE BARRIER								Roll			Roll
Acoustiflex SQ 27 - (2.5kg)	2.5kg 2.5mm = Pyrotek - Wavebar Quadzero 4kg & Thermotec - Nuwave 4kg	Roll	19Kg	44	1.3 x 5.4	7.02	\$ 24.05	\$ 168.80	\$ 29.70	\$	208.53
Acoustiflex SQ 29 - (4.0kg)	3.5mm = to Pyrotek - Wavebar Quadzero 6kg & Thermotec - Nuwave 6kg	Roll	23kg	44	1.3 x 4.0	5.20	\$ 25.65	\$ 133.39	\$ 31.69	\$	164.78
Acoustiflex SQ 31 - (6.0kg)	4.5mm =Pyrotek - Wavebar Quadzero 8kg & Thermotec - Nuwave 8kg	Roll	21kg	40	1.3 x 2.5	3.25	\$ 36.06	\$ 117.19	\$ 44.54	\$	144.76
NOISE BARRIERS+SOUND ABSORBERS								Sheet			Sheet
Vybar Marine 48F 10mm	8mm absorber + 2mm noise barrier + aluminium foil facing	Sheet	9Kg	70	1.2 x 1.2	1.44	\$ 78.89	\$ 113.60	\$ 97.51	\$	140.42
Vybar Marine 848F 20mm	2 X Above construction	Sheet	18kg	35	1.2 x 1.2	1.44	\$164.55	\$ 236.95	\$ 203.26	\$	292.69
PIPE LAGGING GreenLAG	BCA Rw 30/45 = to Pyrotek 4525C, Thermotec NuWrap 5							Roll		_	Roll
GL 15/3 - 3m Flat Foam Full or Split Rolls	STANDARD 1300 X 3000	Roll	17Kg	30	1.3 x 3	3.9	\$ 31.37	\$ 122.36	\$ 38.76	\$	151.15
GL 15/5 - 5m Flat Foam Full Rolls	STANDARD 1300 X 5000 factory pick-up/delivery only	Roll	24kg	30	1.3 x 5	6.5	\$ 31.37	\$ 203.93	\$ 38.76	\$	251.91
GL 25/3 - 3m Conv' Foam Full or Split Rolls	STANDARD 1300 X 3000	Roll	18kg	30	1.3 x 3	3.9	\$ 32.62	\$ 127.23	\$ 40.30	\$	157.17
GL 25/5 - 5m Convoluted Foam Full Roll	STANDARD 1300 X 5000 factory pick-up/delivery only	Roll	25kg	30	1.3 x 5	6.5	\$ 32.62	\$ 212.05	\$ 40.30	\$	261.94
ACOUSTIC UNDERLAY ANGELSTEP		_	-	_	-			_			
AngelStep GOLD8	Universal acoustic underlay - 8mm thick	Sheet	0.8kg		1.15 x 1.15	1.3225	\$ 38.31	\$ 50.67	\$ 44.06	\$	58.27
AngelStep 630	Vinyl acoustic underlay - 4mm thick	Sheet	0.5kg		1.2 x 1.2	1.44	\$ 25.98	\$ 37.41	\$ 38.97	\$	56.11
AngelStep 250	Complementary acoustic underlay - 4mm thick	Roll	8kg		1.2 x 25m	30	\$ 10.28	\$ 308.39	\$ 12.69	\$	380.84
AngelStep 85	Specialised acoustic underlay - 8.5mm thick	Sheet			1.2 x 1.2	1.44	\$ 38.31	\$ 55.17	\$ 44.06	\$	63.44
AngelStep 12	Specialised acoustic underlay - 12mm thick	Sheet			1.2 x 1.2	1.44	\$ 38.31	\$ 55.17	\$ 44.06	\$	63.44
AngelStep 48P	Reliable acoustic underlay - 8mm thick	Sheet	5kg		1.15 x 1.15	1.3225	\$ 57.95	\$ 76.64	\$ 68.18	\$	90.16
AngelStep 484P	Timber joist acoustic underlay - 10mm thick	Sheet	8.5kg		1.15 x 1.15	1.3225	\$ 76.09	\$ 100.63	\$ 87.51	\$	115.73

ACOUSTICA PRODUCTS         DESCRIPTION         PACK         Max. Price         Lx Win         Max. Price         TRADE         RETALL           TRADE         TRADE         TRADE         TRADE         TRADE         Note	ACOUSTICA Pty Ltd - JANUARY 2019 PRICE LIST [GST and Freight Costs EXCLUDED]											
Image: standard Tape 939         Part Tape 050 by cartons or individual         16/carton         72mm X 50m         X 19.19         X 2500         X 2500           48mm Yann Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm X 50m         \$ 13.38         \$ \$ 25.00         \$ 25.00           48mm Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm X 50m         \$ \$ 16.80         \$ \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm X 50m         \$ \$ 16.80         \$ \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm X 50m         \$ \$ 16.80         \$ \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         12/carton         48mm x 50m         \$ \$ 11.55         \$ \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ \$ 11.55         \$ \$ 20.75           48mo Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ \$ 11.55         \$ \$ 20.75           48mo Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m	ACOUSTICA PRODUCTS DESCRIPTION PACK WEIGHT Max. Per/Pallet Lx						<u>M2</u>	TRADE		RETAIL		
REINFORCED ALUMINIUM TAPE           Rein         Reint         Reint         Reint         Reint         Reint         Reint           72mm Premium Tape 050         Premium Tape. Sold by cartons or individual         16/carton         48mm x 50m         \$ 19.19         \$ 25.60           48mm Premium Tape 050         Premium Tape. Sold by cartons or individual         24/carton         48mm x 50m         \$ 19.19         \$ 25.60           72mm Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm x 50m         \$ 16.80         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 16.80         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 16.80         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 11.55         \$ 14.27           Carbon Activate Poils         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 15.15         \$ 14.27           Carbon Activate Filter         Standard tape Sold by cartons or individual         24/carton         \$ 18.0         \$ 787.20	L						<u> </u>	m2	Pack	m2		Pack
72mm Premium Tape 050         Premium Tape. Sold by cartons or individual         16/carton         72mm x 50m         \$ 19.19         \$ 25.50           48mm Premium Tape 050         Premium Tape. Sold by cartons or individual         24/carton         48mm x 50m         \$ 13.38         \$ 17.45           72mm X 50m         S 10.19         S 10.19         \$ 25.50           48mm Premium Tape 050         Premium Tape. Sold by cartons or individual         24/carton         48mm x 50m         \$ 13.38         \$ 17.45           72mm X 50m         S 10.60         \$ 20.75         48mm X 50m         \$ 10.50         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm x 50m         \$ 10.60         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 11.55         \$ 14.27           AEROPAC VENTILATORS         AEROPAC VENTILATOR         Internal tube vermine Mesh         \$ 798.00         \$ 798.00           External Weather Grill         Internal tube vermine Mesh         Internal tube vermine Mesh         \$ 51.50         \$ 577.55           Carbon activated filter         Internal filter (carbon impregnated)         Internal filter (carbon impregnated)         \$ 29.40         \$ 29.40         \$ 29.40 </th <th>REINFORCED ALUMINIUM TAPE</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Roll</th> <th></th> <th></th> <th>Roll</th>	REINFORCED ALUMINIUM TAPE								Roll			Roll
48mm Premium Tape 050         Premium Tape. Sold by cartons or individual         24/carton         48mm x 50m         \$ 13.38         \$ 17.45           72mm Standard Tape 939         Standard tape Sold by cartons or individual         16/carton         72mm x 50m         \$ 16.80         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 16.80         \$ 20.75           AEROPAC VENTILATORS           Jack Sold by cartons or individual         24/carton         48mm x 50m         \$ 18.80         \$ 78.00         \$ 732.90         \$ 798.00           AEROPAC VENTILATOR         Box         5kg         54 x 37 x 16cm         \$ 798.00           External Weather Grill         Standard Tape 939         \$ 5kg         \$ 5kg         \$ 54 x 37 x 16cm         \$ 732.90         \$ 798.00           Letternal Weather Grill         Standard Tape 939         \$ 54 x 37 x 16cm         \$ 5 29.80         \$ 798.00           Letternal Weather Grill         Standard Tape 930         \$ 5 737.5         \$ 737.90         \$ 798.00         \$ 798.00         \$ 798.00 <td>72mm Premium Tape 050</td> <td>Premium Tape. Sold by cartons or individual</td> <td>16/carton</td> <td></td> <td></td> <td>72mm x 50m</td> <td></td> <td></td> <td>\$ 19.19</td> <td></td> <td>\$</td> <td>25.60</td>	72mm Premium Tape 050	Premium Tape. Sold by cartons or individual	16/carton			72mm x 50m			\$ 19.19		\$	25.60
Number Name         Standard tape Sold by cartons or individual         16/carton         72mm x 50m         1         \$ 16.80         \$ 20.75           48mm Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 11.55         \$ 14.27           AEROPAC VENTILATORS           Lateropace Ventileating         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         Calcon         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         Calcon         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         Standard Tape 930         Standard Ta	48mm Premium Tape 050	Premium Tape. Sold by cartons or individual	24/carton			48mm x 50m			\$ 13.38		\$	17.45
Atmos         Standard Tape 939         Standard tape Sold by cartons or individual         24/carton         48mm x 50m         \$ 11.55         \$ 14.27           AEROPAC VENTILATORS           AEROPAC VENTILATOR         Box         5kg         54 x 37 x 16cm         \$ 732.90         \$ 798.00           External Weather Grill         Image: Sold by cartons on individual         Image: Sold by cartons on individual         Sold         S 18.90         \$ 798.00           Dist foam filter (carbon impregnated)         Image: Sold by cartons on impregnated)         Image: Sold by cartons on impregnated         S 19.00         S 17.35         S 18.20	72mm Standard Tape 939	Standard tape Sold by cartons or individual	16/carton			72mm x 50m			\$ 16.80		\$	20.75
AEROPAC VENTILATORS         Image: base in the second	48mm Standard Tape 939	Standard tape Sold by cartons or individual	24/carton			48mm x 50m			\$ 11.55		\$	14.27
AEROPAC VENTILATOR         Box         5kg         54 x 37 x 16cm         \$ 732.90         \$ 798.00           External Weather Grill         Image: Second Sec	AEROPAC VENTILATORS	AEROPAC VENTILATORS										
External Weather Grill       \$ 29.00       \$ 29.00         Internal tube vermine Mesh       \$ 19.00       \$ 19.00         Carbon activated filter       \$ 57.75       \$ 57.75         Dust foam filter (carbon impregnated)       \$ 29.40       \$ 29.40       \$ 29.40	AEROPAC VENTILATOR		Box	5kg		54 x 37 x 16cm			\$ 732.90		\$	798.00
Internal tube vermine Mesh         \$ 19.80         \$ 19.80           Carbon activated filter         \$ 57.75         \$ 57.75           Dust foam filter (carbon impregnated)         \$ 29.40         \$ 29.40	External Weather Grill								\$ 29.80			
Carbon activated filter         \$ 57.75         \$ 57.75           Dust foam filter (carbon impregnated)         \$ 29.40         \$ 29.40	Internal tube vermine Mesh								\$ 19.80			
Dust foam filter (carbon impregnated) \$ 29.40 \$ 29.40	Carbon activated filter								\$ 57.75		\$	57.75
	Dust foam filter (carbon impregnated)								\$ 29.40		\$	29.40

## Annexe E: Logistics Invoice Container

For, Charles Millgate Acous charliemillgate@yahoo.com



**QT2120273879** Issue Date : May 19, 2020 Quote valid until : June 2, 2020 Estimated transit time : 45 Days

#### Ocean Freight Quote

Transport	: Ocean	Origin	City	: Barangaroo		
Movement	: Door to por	t <b>Loadir</b>	ng Port	: Sydney	Discharge P	ort : Le Havre
CO2	: 2.565 KG	Zip/Po	stal Code	: 2000		
Emission						
Cargo Deta	ils					
Quantity		Container S	ize			
1		20' General	Purpose			
Insurance I	ncluded		Cargo Value	•		
-			-			
Item Descri	ption					
Insulation						
Origin Cha	rges					EUR 1004.86
Charge Nar	ne					Total Price
Advance F	ling Rules (Al	FR)				32.24
Agency Fe	e					47.71
BL Fee						80.52
Booking Fe	es					53.68
Inland Fuel	Surcharge					36.83
ISPS						14.91
Pick-Up Ch	arges					283.30
Port Charg	es					331.02
Port Infrast	ructure Charc	e				64.41
Road Tolls		,-				45.33
SOLAS/VG	M Administra	tion/Process	sina Fees			14.91
002.10.10			ing i coo			
Internation	al Charges					EUR 856.63
Charge Nar	ne					Total Price
Gulf of Ade	n surcharge					50.66
Miscellane	ous charges					142.77
Oceanfreig	ht					644.78
Suez Cana	I Surcharge					18.42
Destination	Charges					EUD 340.00
Charge Mar	n onarges					Total Price
Destination	THC					220.00
Documente	tion					230.00
						00.00
1353						20.00
				G	rand Total	EUR 2171.49