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INTERNATIONAL  
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# Establishment of Start-up Laboratory Facility in Romania Market

Master's Thesis in Business Administration,  
EMBA 2018-2020 Program

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## **Executive Summary**

This dissertation subject regards the formulation of a business plan, for a potential Start-up private laboratory providing company in Romania. Project has a realistic base, as it is structured and evaluated as an out-of-the-border expansion proposal for AGROLAB RDS, an existing private organization, operating in certain segments of the Testing, Inspection and Certification Services (TICS) market in Greece, Cyprus, Bulgaria and Turkey.

Examined organization already holds a small but strategically crucial market share in Romania but does not have any locally based business structure or development network to support further growth. With domestic competition rapidly developing the formulated business environment creates a critical dilemma of : whether to substantially invest in the country, to secure and expand company's current market share, by introducing a domestic laboratory infrastructure and creating a local business network or , costly-free , relay in maintaining current business model with a high risk of losing the market by domestic competition, within the next 2 to 3 years.

This Thesis evaluates current organization's structure, strategy and developing potentials, in comparison with the maturity and the estimated size of Romania TICS market. On this basis a 5-year business plan is suggested for a domestic laboratory infrastructure to furtherly promote organizations growth strategy. Strategic aim for the new start-up company is not only to achieve rapid market penetration in Romania but also to become a pillar for whole organization's further growth, development and expansion in the Balkan area. To achieve this goal, business plan is formulated around specific requirements concerning the size of the company, the provided services to be internally developed and the developing timetable. Based on anticipated sales forecasts and certain risk constrains, concerning the domestic market environment, alternative scenarios are formulated and evaluated in terms of the achieved business operation, revenue, cash flow and profitability.

## **Acknowledgment**

I would like to express my sincere thanks to AGROLAB RDS' management team for providing me all the required information and data to develop this project on a realistic base:

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Thessaloniki 29.02.2020

Stavros Priftis

## Glossary

Glossary - Definitions	
ANPC	National Authority for Consumers Protection
ANSVSA	National Sanitary Veterinary and Food Safety Authority
BNN	Bundesverband Naturkost Naturwaren
BRC Standard	British Retail Consortium Standard
CAGR	Compound Annual Growth Rate
DNA	Qualität und Sicherheit
EBITDA	Earnings before interest, tax, depreciation, and amortization
ERP (system)	Enterprise Resource Planning (system)
EUID	European Unique Identifier
EV	Enterprise Value
F.Y.	Financial Year
FOSFA	Federation of Oils, Seeds & Fats Associations
GAFTA	Cooperation Centre for Scientific Research Relative to Tobacco
GC/MS	Gas Chromatography Mass Spectrometry
GC/MS-MS	Gas Chromatography-tandem Mass Spectrometry
GC-ECD	Gas Chromatography – Electron Capture Detector
GC-FPD	Gas Chromatography – Flame Photometric Detector
GC-ID	Gas Chromatography – Isotope Dilution
GC-NPD	Gas Chromatography – Nitrogen Phosphorous Detector
GDP	Gross Domestic Product
GEP	Good Experimentation Practices
GLP	Good Laboratory Practice
GMO	Genetically Modified Organisms
H.A.C.C.P.	Hazard Analysis and Critical Control Points
HPLC	High Performance liquid chromatography
HRM	Human Resource Management
ICP-MS	Inductively Coupled Plasma Mass Spectrometry
ICP-OES	Inductively Coupled Plasma - Optical Emission Spectrometry
ICT	Information and Communication Technology
IFS	International Food Standard
IHRM	International Human Resource Management
IOC	International Oil Council
IT	Information Technology
MARD	Ministry of Agriculture and Rural Development
MOH	Ministry of Health
MRL	Maximum Residue Limit
QS	Grain and Feed Trade Association

QTOF LC-MS	Quadrupole Time-of-Flight ,bLiquid Chromatography Mass Spectrometry
R&D	Research & Development
RENAR	Romanian Accreditation Association
RM	Refference Material
SAP	Systeme, Anwendungen, Produkte
SEDEX	Sedex Members Ethical Trade Audit
SMETA	Supplier Ethical Data Exchange
SRL	Societate cu Raspundere Limitata (Limited Liability Company)
TICS Market	Testing, Inspection and Certification Services Market
UPLC/MS	Ultraperformance Liquid Chromatography Mass Spectrometry
UPLC/MS-MS	Ultraperformance Liquid Chromatography-tandem Mass Spectrometry
UV – FIAS	Flow Injection Analyser System
VAT	Value Added Tax

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## **Introduction**

Proposed project will be to formulate a business plan for out-of-the-border expansion of AGROLAB RDS<sup>1</sup>, an existing group of companies, operating in certain segments of the Testing, Inspection and Certification Services (TICS) market. Goal will be to evaluate Romanian TIC's market opportunities, company's strengths and weaknesses and create a realistic business plan for a start-up laboratory facility in Romania, able to promote organization's further development and expansion, as a critical part of its existing growth strategy.

This thesis is going to present the background of AGROLAB RDS in terms of structure, operation and business strategy as well as to explore existing and future business opportunities in the targeted county of Romania.

A 5-year Project finance will be presented for establishing a domestic laboratory infrastructure, concluding in evaluating the proposed start-up investment and propose future actions and recommendations.

### **1. Motivation/ Oportunity**

AGROLAB RDS is company with constant growth for the last 7 years and is considered a market leader in Greece, Bulgaria and Cyprus, in providing laboratory analytical services in the Agricultural sector, the Food & Feed Industry and the Environmental Protection Branch. A major part of this growth was originated from extroversion business activity including, among others, the Romania market. Being able to penetrate Romania market and collaborate with one of the biggest retailer (for its internal monitoring on Food and Fruit & Vegetables safety) as well as with one domestic laboratory (acting as a sub-contractor for analytical services in Food and Fruit & Vegetables analysis) company managed to achieve a substantial market share (Figure 1.1) which reached the ■■■ K euros for F.Y. 2019.

The fact that AGROLAB RDS does not have any business structure or business development network in Romania while the domestic competition is rapidly developing, no dramatical turnover increase should be expected for the upcoming years. On the contrary, lack of domestic market support could gradually reduce company's presence in the country.

This creates a logical dilemma of : whether to substantially invest in the country, to secure and expand company's current market share, by introducing a domestic laboratory infrastructure and creating a local

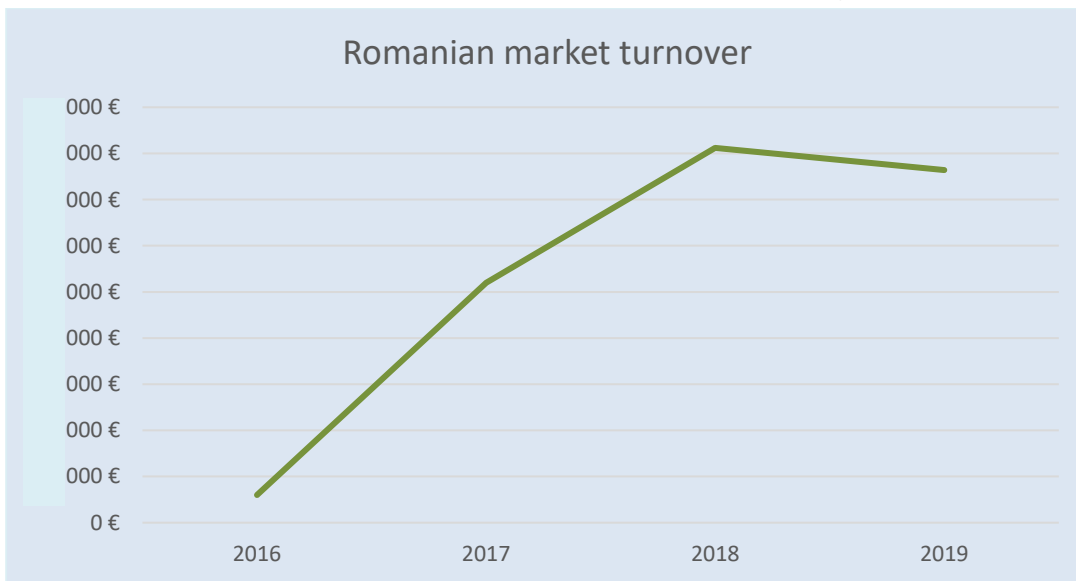
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<sup>1</sup> <http://www.agrolab-rds.gr>

business network or , costly-free , relay in maintaining current business model with a high risk of losing the market by domestic , country-based competitors, within the next 2 to 3 years.

In compliance with current company’s growth orientation and since possible loss of the Romania market would have a negative impact in organization’s profitability and growth expectations, a start-up facility infrastructure is to be evaluated as an opportunity not only for domestic market penetration but also as a “vehicle” for further penetration in the Balkan area.

**Figure 1.1** Agrolab RDS’ turnover in Romanian market (source : Agrolab RDS)



## 2. Company Presentation

AGROLAB RDS is a private group of companies, providing laboratory testing services in the Agricultural sector, the Food & Feed Industry and the Environmental Protection Branch.

It is a former member of Greek REDESTOS-group<sup>2</sup> and was recently acquired<sup>3</sup> by TENTAMUS-group<sup>4</sup> of laboratory testing services. It’s clientele list includes more than 4.500, long-term cooperation, legal entities, from Greece, Cyprus, Germany, Austria, Turkey, Belgium, Bulgaria, Romania and even India,

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<sup>2</sup> <http://www.redestos.gr>

<sup>3</sup> <http://www.agrolab-rds.gr/default.aspx?lang=el-GR&page=310&newsid=327>

<sup>4</sup> <https://www.tentamus.com/>

with an total achieved turnover of █████ million Euros for F.Y. 2019 (Figure 2.1), average growth rate of █████% , during the last and an forecasted revenue above █████ M Euros for F.Y. 2020 .

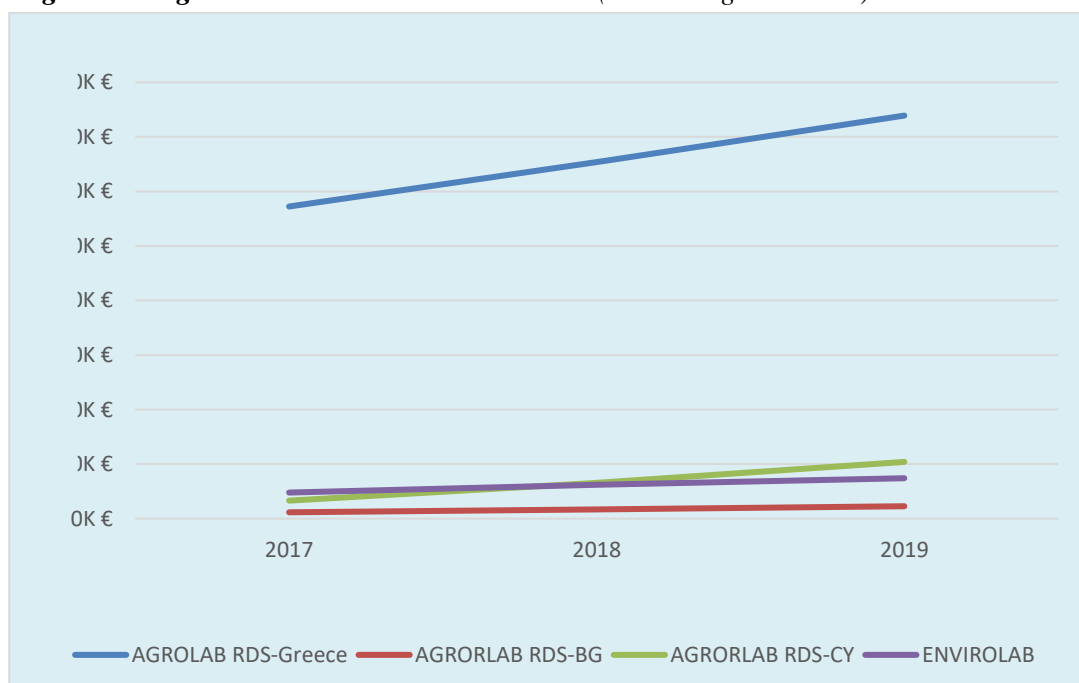
The group consists of the following five main companies, being *AGROLAB RDS-Greece*, *Envirolab IKE*, *AGROLAB RDS-Bulgaria Slt*, *AGROLAB RDS-Cyprus LTD* and *AGROLAB RDS-Turkey* .

### Mission Statement.

Company’s Mission Statement is to “provide laboratory and advisory solutions through quality excellence, reliability and continuous development, aiming at offering to its customers and the market excellent services that fully cover their needs at reasonable prices, while providing a fair profit to the shareholders”<sup>5</sup>. Key elements in achieving this mission statement are the core values of the company and its employees who are:

- Quality, as a competitive advantage
- Innovation as a driving force for growth
- The customer service as a priority
- Clear superiority and maintenance of the high reputation of the company as a guide

**Figure 2.1 Agrolab RDS turnover achievement** (source: Agrolab RDS)



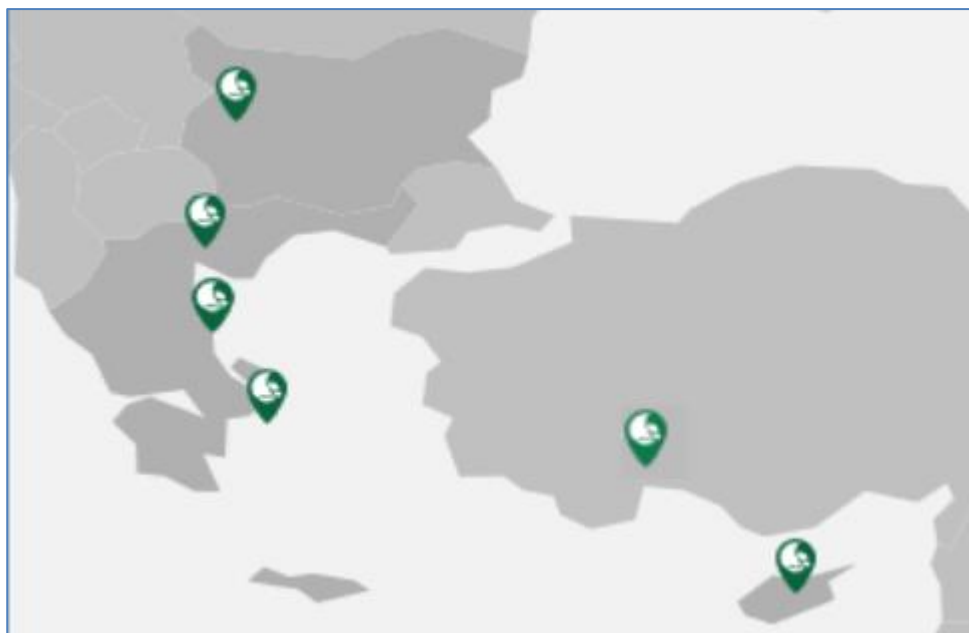
<sup>5</sup> <http://www.agrolab-rds.gr/default.aspx?lang=en-US&page=270>



## 2.1 AGROLAB RDS' Divisions

AGROLAB RDS group has a centralized General, Technical and Commercial management, operating in five separate companies (legal entities) and five independent laboratory facilities, in Greece, Cyprus, Bulgaria and Turkey (Figure 2.2).

*Figure 2.2 Current Agrolab Rds' administration & laboratory sites (source : Agrolab RDS)*



### 2.1.1 AGROLAB RDS-Greece

AGROLAB RDS-Greece is the group's Parent company and main laboratory entity. Laboratory services are provided at two independent accredited laboratory facilities, located in Thessaloniki (2.500m<sup>2</sup>) and in Athens (1.000m<sup>2</sup>). In these two facilities the following independent testing laboratories are operating:

#### Thessaloniki facility:

- The **Food Contaminant Laboratory**, for identifying pesticide, toxins and other various contaminants residues in agricultural products, food and animal feed.
- The **Foodstuff Nutritional Labeling Laboratory**, for conducting nutritional chemical analysis in food and animal feed, as well as metals, heavy metals and food preservatives.
- The **Environmental Laboratory** for conducting chemical and contaminant analysis of potable water, wastewater, soil and plant tissues.
- The **Sensory Testing Laboratory**, for developing foodstuff's organoleptic profile and conducting sensory evaluations.

- The **Quality Control Laboratory for Plant Protection Products & Fertilizers**, offering a variety of laboratory services in formulated Plant Protection Products & Fertilizers.

Athens facility:

- The **Residue Laboratory**, for identifying pesticide residues in farming products and foodstuffs.
- The **Microbiology Laboratory**, conducting a wide range of microbiological controls in food & animal feed, potable water and wastewater.
- The **Molecular Laboratory** for conducting GMO (Genetically Modified Organisms) controls in crop seeds and agricultural products, DNA species analysis in meat products and allergens analysis in food products.
- The **Fats & Oils Laboratory**, for conducting accredited contaminant and authenticity chemical analysis in fats & oils.

Additionally, AGROLAB RDS-Greece offers the following consulting services through the following independent departments:

- the **Department of Field Studies**, responsible for conducting field studies in supporting for the approval of new plant protection products registrations.
- the **Legislative Support Department**, offering legislative consultancy and label declaration evaluation services.

### **2.1.2 Envirolab IKE**

Envirolab IKE is located in in Volos-Greece. Operating in a 600m<sup>2</sup> laboratory testing facility, its infrastructure supports a wide range of accredited environmental testing services, such as microbiological, chemical and contaminant parameters. Additionally, Envirolab IKE offers environmental control sampling services and environmental studies consulting services.

### **2.1.3 AGROLAB RDS-Bulgaria Slted**

AGROLAB RDS-Bulgaria Slted is a, commercial company, 100 % subsidiary of AGROLAB RDS-Greece, which was founded in 2010 to penetrate the promising (at that time) Bulgarian market. At this moment, no laboratory facility exists, and all required laboratory testing services are provided by AGROLAB RDS-Greece, by sample dispatches via courier

#### **2.1.4 AGROLAB RDS-Cyprus LTD**

AGROLAB RDS-Cyprus LTD was founded in 2017 through acquisition of 70% of GEM analysis LTD as a “vehicle” to penetrate the Cyprus TICS market. Its 900m<sup>2</sup> laboratory facilities are located in the industrial zone of Latsia Cyprus, offering a variety of analytical control services in food, animal feed and potable water, such as:

- Microbiology testing.
- Chemical testing (nutritional analysis, heavy metal analysis, preservatives analysis etc).
- Total migration testing in food packaging material.
- Allergen testing.

#### **2.1.5 AGROLAB RDS-Turkey**

A start-up laboratory, 100 % subsidiary company of AGROLAB RDS-Greece, founded in 2019 in Antalya, Turkey to service the domestic pesticide residue monitoring market in the Agriculture sector. Company is still under development and co-supported by AGROLAB RDS-Greece, in terms of the provided testing services

## **2.2 Management and Organization chart**

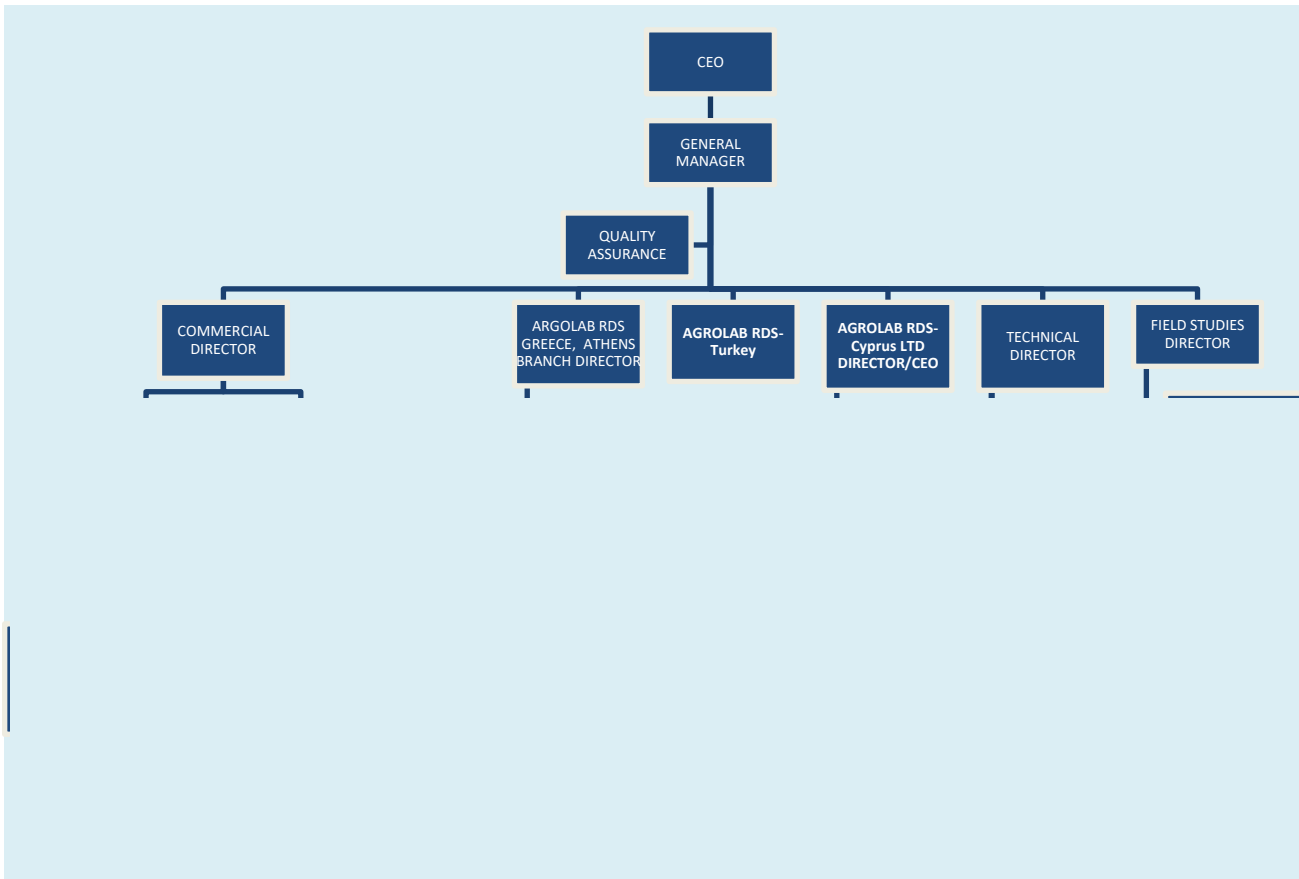
Above mentioned companies are managed, overviewed and supported by one General Manager, responsible for group’s total operation and strategy implementation, reporting directly to group’s CEO (Figure 2.3).

A Commercial Director is responsible for all Marketing, Sales and Customer Service activities. Sales department consists of a total of ■ sales area managers, each one responsible for a specific market segment, while Customer Service department consists of more than ■ employees.

A Technical Director is in charge of all group’s technical departments and responsible for overseeing all group’s laboratory testing efficiency and R&D activities. The technical dpt. Consists of 10 experienced technical managers, each one responsible for a specific laboratory operation.

Services of Information Technology (IT), Human Resource Management (HRM), Finance and Accounting are externally supported by REDESTOS-group in Greece, and other external collaborators in Bulgaria and Cyprus.

**Figure 2.3 Agrolab RDS' organization chart (source : Agrolab RDS)**



### **2.3 AGROLAB RDS' Services**

AGROLAB RDS offers a huge variety of Laboratory-Testing and Consulting services, in the following categories/industries/market sectors (Tables 2.1 & 2.2) :

- Food & Beverages industry
- Baby Food industry
- Fat & Oils (production, manufacture, distribution)
- Certification Bodies (Food & Agriculture industry)
- Potable water monitoring sector (State monitoring)
- Environmental Protection sector (State monitoring)
- Agricultural Production sector (cooperatives, packing houses, consultants)
- Retailers/Supermarkets
- Catering services industry
- Tobacco industry
- Animal Feed industry
- Tourism Industry
- Packaging industry
- Plant Protection sector

**Table 2.1 Provided Testing Services from Agrolab RDS**

SECTOR/INDUSTRY SERVING	PROVIDED TESTING SERVICES											
	Microbiological testing	GMO testing	Allergen testing	Pesticide Residue testing	Mycotoxin testing	Fats & Oils testing	Organic & Inorganic Contaminants testing	Nutritional analysis testing	Heavy metals, Food preservatives	Sensory testing	Soil testing	Plant Protection Products & Fertilizers testing
Food & Beverage industry												
Baby Food industry												
Catering services industry												
Tourism Industry												
Potable water monitoring sector												
Environmental Protection sector												
Fat & Oils sector												
Packaging industry												
Tobacco industry												
Animal Feed industry												
Certification bodies												
Agricultural Production sector												
Plant Protection sector												
Retailers/Supermarkets												

**Table 2.2 Provided Consulting Services from Agrolab RDS**

SECTOR/INDUSTRY SERVING	PROVIDED CONSULTING SERVICES		
	Field Studies Services	Reproductive Material Research and Development Services	Legislative Support services
Food & Beverage industry			
Baby Food industry			
Catering services industry			
Tourism Industry			
Potable water monitoring sector			
Environmental Protection sector			
Fat & Oils sector			
Packaging industry			
Tobacco industry			
Animal Feed industry			
Certification bodies			
Agricultural Production sector			
Plant Protection sector			
Retailers/Supermarkets			

### 2.3.1 Analytical Scope and Number of Samples

In total, the company has the ability to commercially offer more than [REDACTED] different parameters/services (accredited or not, executed “in house” or through collaboration with other laboratories), in the following segments/categories. During 2019 AGROLAB RDS has provided its services through testing more than [REDACTED].000 samples (source AGROLAB RDS)

- Microbiological testing
- Nutritional elements
- Heavy metals
- Pesticide residue analysis
- Toxins/Mycotoxins testing
- Inorganic contaminants
- Fat & Oils analysis
- Allergen testing
- Dioxins, PAHs, MCPD, MOSH
- Acrylamide
- Sensory testing
- Soil contaminants/Soil nutrient testing
- GMO testing
- Food Preservatives testing
- Authenticity elements
- Plasticizer Migration testing

### 2.3.2 Accreditations and Certifications

Emphasizing in offering services of the highest available quality, AGROLAB RDS organization operates according to the following quality systems:

- Accreditation according to **ISO/IEC 17025**<sup>6</sup>. AGROLAB RDS validates a number of more than 900 accredited laboratory testing parameters in Water, Wastewater, Food, Baby food, Animal feed, Fruit & Vegetables, Vegetable Oils and Seed matrixes.
- **QS (Qualität und Sicherheit)**<sup>7</sup> certification for pesticide residue controls.
- **GAFTA (Grain and Feed Trade Association)**<sup>8</sup> certification.
- **CORESTA (Cooperation Centre for Scientific Research Relative to Tobacco)**<sup>9</sup> certification.
- **BNN (Bundesverband Naturkost Naturwaren)**<sup>10</sup> certification, concerning controls on organic products.

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<sup>6</sup> <https://www.iso.org/publication/PUB100424.html>

<sup>7</sup> <https://www.q-s.de/qs-scheme/qssystem-en.html>

<sup>8</sup> <https://www.gafta.com/>

<sup>9</sup> <https://www.coresta.org/>

<sup>10</sup> <https://n-bnn.de/>

- **IOC** (International Oil Council)<sup>11</sup> certification.
- **FOSFA** (Federation of Oils, Seeds & Fats Associations Ltd)<sup>12</sup> certification.
- **SMETA** (Supplier Ethical Data Exchange) / **SEDEX** (Sedex Members Ethical Trade Audit)<sup>13</sup> certification.
- **GLP** (Good Laboratory Practice) certification for the conduction of studies for pesticides residues from the General Chemical State Laboratory of Greece.
- **GEP** (Good Experimentation Practices) certification for the conduction of studies for agricultural pesticides from the Greek Ministry of Rural Development and Food.

Above Accreditations and Certifications not only ensure company’s technical capability and efficiency, a critical prerequisite for a testing laboratory, and additionally satisfy client’s internal commercial requirements and are considered a vital asset for organization’s performance in the TICS market.

### 2.3.3 Laboratory Equipment and Technology & Operations Management

Table 2.3, presents the type and available units of t advanced analytical testing equipment that organization operates to ensure both technical and capacity capability. Technology and Operations management is achieved by an internally developed *Laboratory Information Management System (LIMS)* and *S.A.P.* ERP system (Figure 2.4)

**Table 2.3** *AGROLAB RDS analytical equipment (source : Agrolab RDS)*

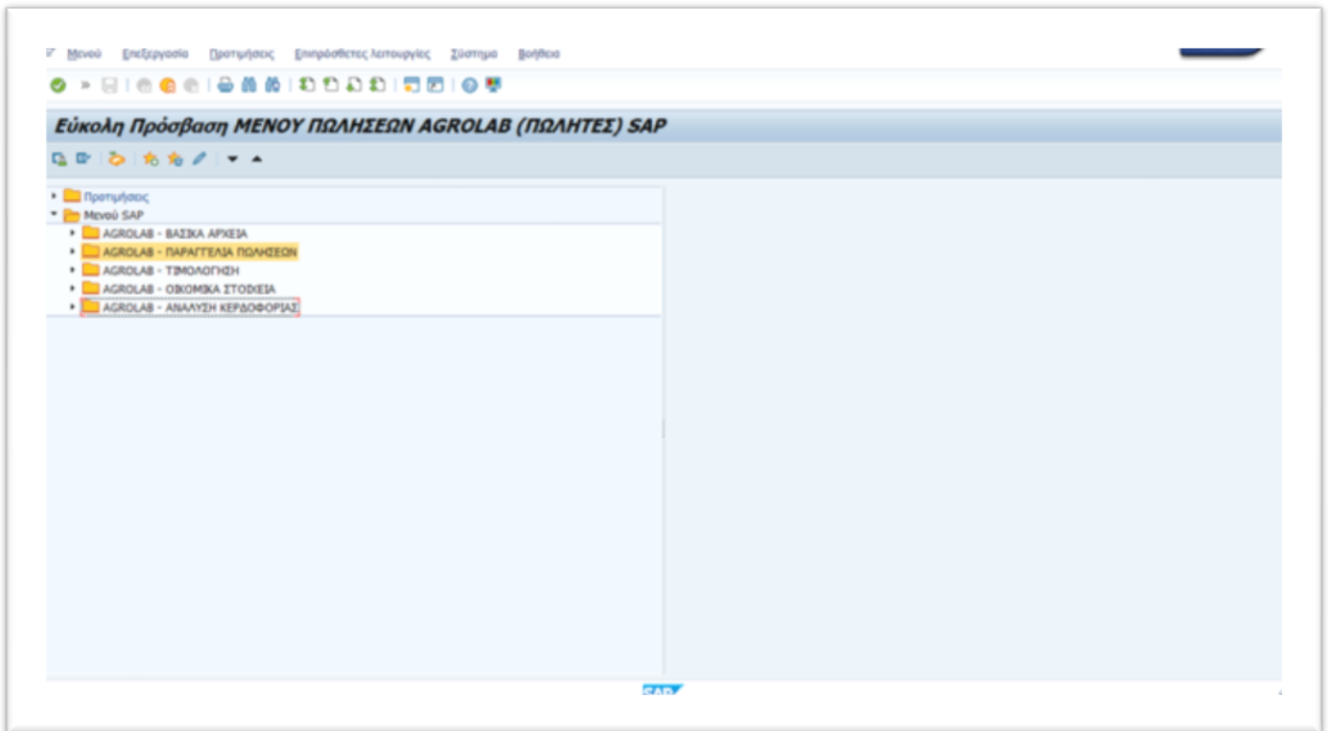
<b>Type of laboratory equipment</b>	<b>Nr. of units</b>	<b>Type of laboratory equipment</b>	<b>Nr. of units</b>
QTOF LC-MS		GC/ NPD/ECD/FPD/FID	
UPLC/MS-MS		HPLC	
UPLC/MS		UV/VIS – FIAS	
GC/MS-MS		ICP-MS	
GC/MS		ICP-OES	

<sup>11</sup> <https://www.internationaloliveoil.org/>

<sup>12</sup> <https://www.fosfa.org/>

<sup>13</sup> <https://www.sedexglobal.com>

Figure 2.4 Applied LIMS and SAP Systems



The screenshot shows the AGROLAB RDS LIMS interface. It features a sidebar with navigation options like 'Οργάνωση', 'Τμ.κατάλογος', and 'Αναλύσεις'. The main area displays a table of analyses with the following columns: Κωδικός, Κ.Α.Σ., Περιγραφή, Ενότητα, Υπεύθυνος, Χρόνος, Διατεταμέν, Δραστήριος, and Παράμετρος. The table contains several rows of data, including:

Κωδικός	Κ.Α.Σ.	Περιγραφή	Ενότητα	Υπεύθυνος	Χρόνος	Διατεταμέν	Δραστήριος	Παράμετρος
1122	30901213	Polychlorinated Biphenyl (PCBs)/Πολυχλωρούμενα Βεφανίλια (PCBs)	Ο ΚΩΔΙΚΟΣ ΕΙΝΑΙ ΣΕ ΑΝΑΣΤΟΗ	ΝΕΡΟ	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1137	30903194	Polychlorinated Biphenyl (PCBs)/Πολυχλωρούμενα Βεφανίλια (PCBs)	ΕΣΩΤΕΡΙΚΟ ΕΡΓΑΣΤΗΡΙΟ	ΕΛΛΗΝΟΣ	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1055	30205332	(P11) Pesticides residues with GC-MS-MS email/(P11) Υπολείμματα με GC-MS-MS μικρό	02 ΕΡΓ. ΤΡΟΦΙΜΩΝ-ΒΕΛ.ΚΗ	ΛΑΛΙΑΝΙΚΑ, ΝΟΤΑ Η ΚΑΤΕΥΘΥΜΕΝΑ	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1056	30905333	(P11) Pesticides residues with GC-MS-MS email/(P11) Υπολείμματα με GC-MS-MS μικρό	05 ΕΡΓ. ΥΠΟΛΕΙΜΜΑΤΩΝ-ΑΘΗΝΑ	ΛΑΛΙΑΝΙΚΑ, ΝΟΤΑ Η ΚΑΤΕΥΘΥΜΕΝΑ	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
907	30210302	(P2) Pesticides in Apples with UPLC & GC-MS-MS & Dtm./ (P2) Υπολείμματα σε Μηλα με UPLC & GC-MS-MS & Dtm. (372 δραστικά)	Ο ΚΩΔΙΚΟΣ ΕΙΝΑΙ ΣΕ ΑΝΑΣΤΟΗ	Μέλι (Αγρόκλητο (Nektar sylvestris))	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
891	30208302	(P2) Pesticides in Asparagus with UPLC & GC-MS-MS & Dtm./ (P2) Υπολείμματα σε Σπαράγγια με UPLC & GC-MS-MS & Dtm. (372 δραστικά)	Ο ΚΩΔΙΚΟΣ ΕΙΝΑΙ ΣΕ ΑΝΑΣΤΟΗ	Σπαράγγια	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
895	30908302	(P2) Pesticides in Asparagus with UPLC & GC-MS-MS & Dtm./ (P2) Υπολείμματα σε Σπαράγγια με UPLC & GC-MS-MS & Dtm. (372 δραστικά)	Ο ΚΩΔΙΚΟΣ ΕΙΝΑΙ ΣΕ ΑΝΑΣΤΟΗ	Σπαράγγια	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
899	30209302	(P2) Pesticides in Kiwi with UPLC & GC-MS-MS & Dtm./ (P2) Υπολείμματα σε Ακτινίδια με UPLC & GC-MS-MS & Dtm. (372 δραστικά)	Ο ΚΩΔΙΚΟΣ ΕΙΝΑΙ ΣΕ ΑΝΑΣΤΟΗ	Ακτινίδια	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### 2.3.4 Personnel

Currently more than ████ people are full-time employed in AGROLAB RDS, almost every one of them with a high degree specialists, such as Agronomists, Chemists, Biologists, Veterinarians, Microbiologists, Food Scientists, Agricultural Technologists and Food Technologists



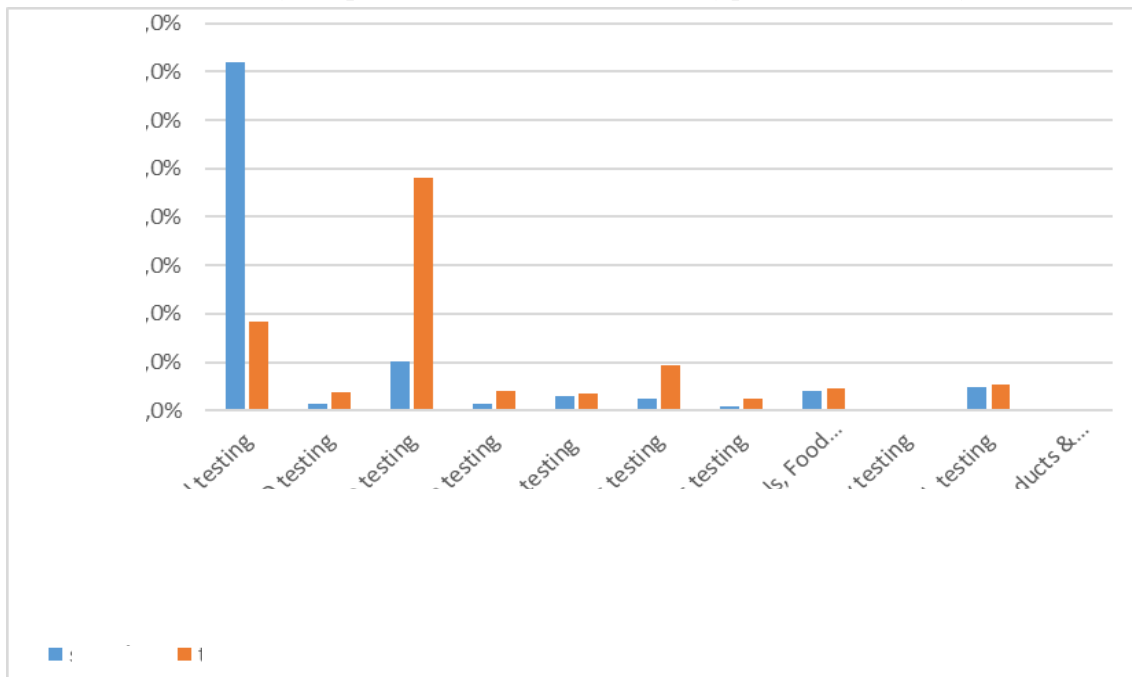
## 2.4 AGROLAB RDS' average prices and revenue contribution

Executed testing services segments from Agrolab RDS (table 2.1) refer to an extended variety of different (in terms of pricing) analytical services. Each one of these analytical services (see Appendix IV) bears its own separate cost and pricing policy and can be offered separately or in combination with other same category services, according to client's requirements. AGROLAB RDS's average selling prices, per testing service segment, and the contribution of each testing segment in total group's turnover are shown below (Table 2.4 & Figure 2.5).

*Table 2.4 Average selling prices per sample (source : Agrolab RDS)*

Type of laboratory testing service	2017	2018	2019
Microbiological testing			
GMO testing			
Pesticide Residue testing			
Mycotoxin testing			
Fats & Oils testing			
Organic & Inorganic Contaminants testing			
Nutritional analysis testing			
Heavy metals, Food preservatives			
Sensory testing			
Soil testing			
Plant Protection Products & Fertilizers testing			

*Figure 2.5. Number of samples & turnover contribution of provided services of Agrolab RDS*



## 2.5 Current Development Strategy

During the last 7 years company has applied an aggressive growth strategy, including several acquisitions of competitors as well as new start-up laboratories, to strengthen its positioning in the market:

- 2013: acquisition of *APPERT*, Greece's 2<sup>nd</sup> largest microbiological laboratory<sup>14</sup>.
- 2013: new start-up laboratory for molecular analysis services<sup>15</sup>.
- 2015: acquisition of *Envirolab IKE*, Greece's 2<sup>nd</sup> largest environmental laboratory<sup>16</sup>.
- 2017: new start-up laboratory in Cyprus (AGROLAB RDS-Cyprus)<sup>17</sup>.
- 2018: acquisition of *Oiltecn S.A.*, Greece's 3<sup>rd</sup> largest oil-and-fats analysis laboratory<sup>18</sup>.
- 2019: new start-up laboratory in Turkey (AGROLAB RDS-Turkey).

Additionally, company strategically proceeded in hiring highly qualified personnel, either independent experts or previous employees of competition, to support its new start up projects.

Most recent and significant aspect of this growth strategy was organization's 70% acquisition by TENTAMUS group on 09.2019<sup>19</sup>.

## 3. The Market

### 3.1 Global TICS Markets Overview

Testing, Inspection and Certification Services international Market (TICS Market) consists of services providers in the Auditing, Inspection, Laboratory testing, Verification, Quality assurance and Certification sector. Global TICS Market is currently estimated at 209 billion euros (Figure 3.1) and expected to grow at 6% CAGR during the period 2018-2024<sup>20</sup>, mainly because of:

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<sup>14</sup> <http://www.agrolab-rds.gr/default.aspx?lang=en-US&page=298>

<sup>15</sup> <http://www.agrolab-rds.gr/default.aspx?lang=en-US&page=299>

<sup>16</sup> <http://www.agrolab-rds.gr/default.aspx?lang=el-GR&page=310&newsid=220>

<sup>17</sup> <http://www.agrolab-rds.com.cy/default.aspx?lang=en-US&page=583>

<sup>18</sup> <http://www.agrolab-rds.gr/default.aspx?lang=el-GR&page=310&newsid=301>

<sup>19</sup> <https://www.tentamus.com/agrolab-rds-joins-tentamus-network/>

<sup>20</sup> Testing, Inspection, and Certification Services Market Key Information By Top Key Player SGS SA, Bureau Veritas, Intertek, DEKRA, Eurofins, TUV SUD, DNV GL, TUV Rheinland, Applus, SYNLAB, TUV Nord, LR, ALS, SOCOTEC, Corelab, Kiwa Group, RINA, Apave : <https://www.openpr.com/news/1532960/Testing-Inspection-and-Certification-Services-Market-Key-Information-By-Top-Key-Player-SGS-SA-Bureau-Veritas-Intertek-DEKRA-Eurofins-TUV-SUD-DNV-GL-TUV-Rheinland-Applus-SYNLAB-TUV-Nord-LR-ALS-SOCOTEC-Corelab-Kiwa-Group-RINA-Apave.html>

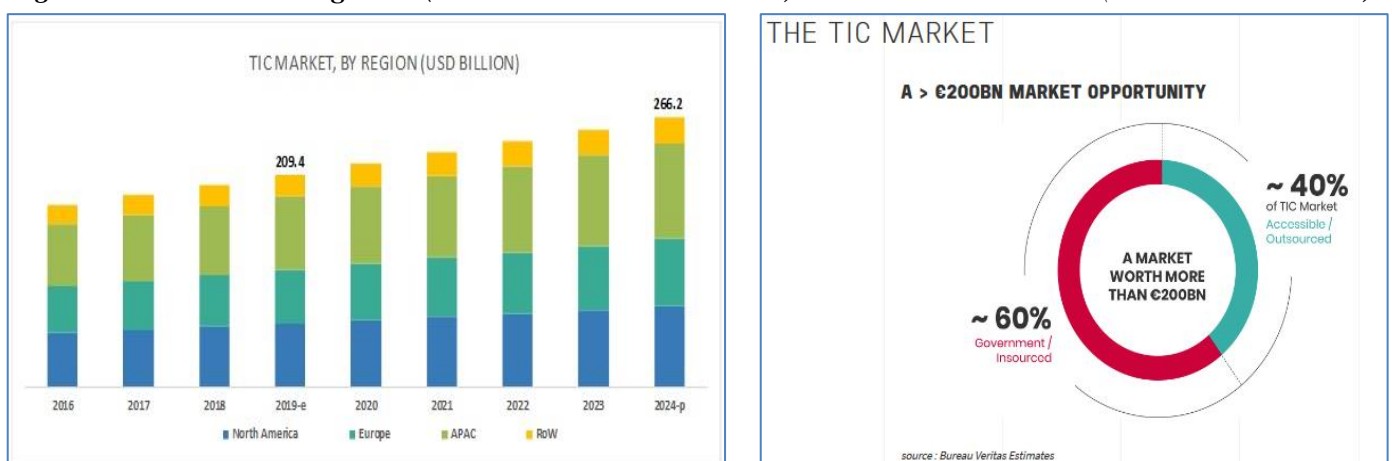
- rise of consumerism and increasing concerns among consumers for improved quality of products & services,
- governments’ focus on health (establishment of new regulations),
- brand protection policies across the globe,
- trade partnerships between the nations and the multinational organizations, which are promoting more quality assurance controls, certification activities and third-party service providers for inspections , encouraging companies to outsource these business operations to offshore countries.

All multinational TICS operators execute a continuous-based growing strategy, mostly include Merge & Acquisition or Start-Up activities, to gain a bigger market share while lowering operating costs in a demanding global environment (e.g. EUROFINS’ 2018 annual report<sup>21</sup>, SGS’ 2018 annual report<sup>22</sup>).

The market is considered as highly fragmented (Figure 3.2), with the top-three “players” (SGS, BureauVeritas and Intertek) to hold a combined market share of less than 25%, while top-10 “players” account for less than 40% of the market (Barclays, 2018).

TICS market also appealing financial metrics, with EBITDA margins around 20% and a gross margin above 35% (Figure 3.3).

**Figure 3.1 TICS’ market growth (source:MarketsANDMarkets) & TICS’ market volume (source: BureuVeritas)**



<sup>21</sup>Annual Report – Eurofins: [https://cdnmedia.eurofins.com/corporate-eurofins/media/12148089/eurofins-2018-annual-report\\_final-signed-pwc.pdf](https://cdnmedia.eurofins.com/corporate-eurofins/media/12148089/eurofins-2018-annual-report_final-signed-pwc.pdf)

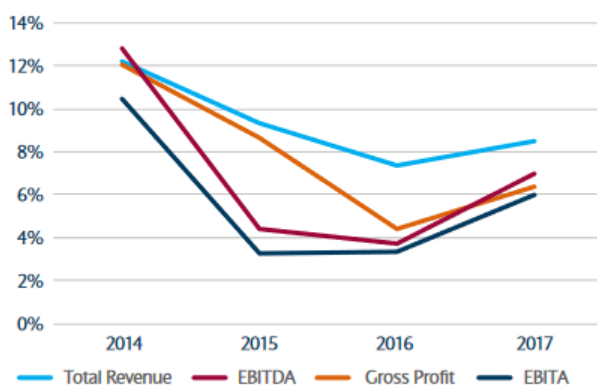
<sup>22</sup>Annual Report – SGS: <https://www.sgs.com/-/media/global/documents/financial-documents/financial-reports/2018/sgs-2018-annual-report.pdf>

Figure 3.2 TICS market fragmentation (source: BureauVeritas)

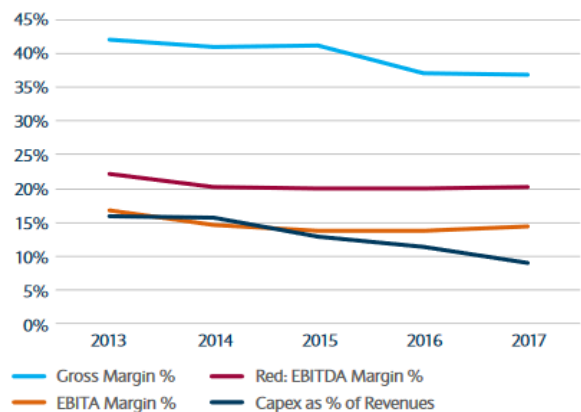
Business	Fragmentation	Competitive Environment
Marine & Offshore	Medium	12 members of the International Association of Classification Societies (IACS) class more than 90% of the global shipping fleet.
<b>Agri-Food &amp; Commodities</b>		
- Agri-Food	High	A few global players. A large number of local players.
- Commodities	Medium	A few global players. A few regional groups and specialized local players.
- Government services and international trade	Low	Four main players for government services.
Industry	High	A few large European or global players. A large number of highly specialized local players.
Buildings & Infrastructure	High	A few regional players. A large number of local players.
Certification	High	A few global players and quasi-state-owned national certification bodies, and many local players.
Consumer Products	Medium	A relatively concentrated market for toys, textiles and hardline products. Fragmented markets for electrical products and electronics.

Figure 3.3 TICS' sector CAGR% & margin analysis (source: Capital IQ, Barclays 2018<sup>23</sup>)

TIC sector trading profile: CAGR%



TIC sector trading profile: Margin analysis



<sup>23</sup><https://www.barclayscorporate.com/content/dam/barclayscorporate-com/documents/insights/industry-expertise/Testing-Report-2018.pdf>

## 3.2 Romania Laboratory Testing Services Market ( 5 Cs Analysis Framework )

A situation analysis, through the 5Cs framework will help to examine AGROLAB RDS's anticipated internal and external environment in the Romania market, identify the essential marketing insights and identify fundamental opportunities, problems and challenges company might face.

### 3.2.1 Context – Romanian business environment

At around 92.043 square miles, Romania is the 9th largest country of the European Union, by area, located at the crossroads of Southeastern and Central Europe, on the Lower Danube, north of the Balkan Peninsula and the western shore of the Black Sea. Romania shares a border with Hungary and Serbia to the west, Ukraine and Moldova to the northeast and east, and Bulgaria to the south. Its capital and largest city is Bucharest, which is the 6th largest city in the European Union. As of 2010, Romania is an upper-middle income country with a high Human Development Index. Romania joined NATO in 2004 and the European Union in 2007. It is a member of the Latin Union, Francophonie, OSCE, WTO, BSEC, United Nations and many others.

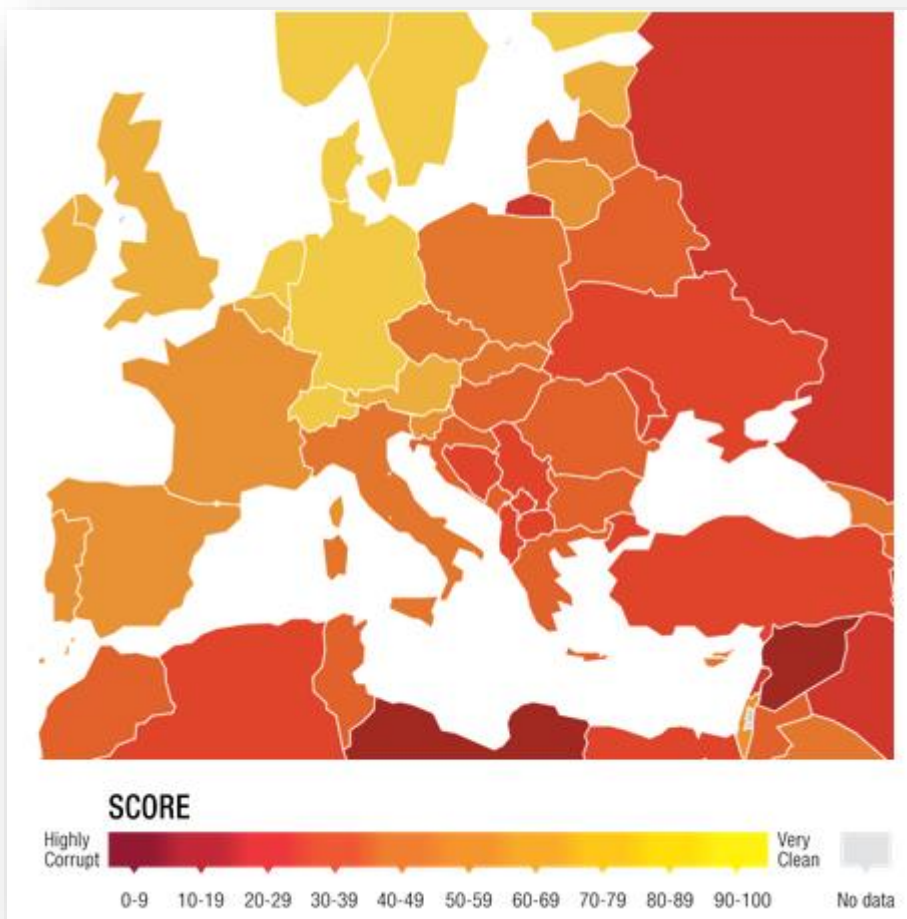
<p><b>Political Factors</b></p> <ul style="list-style-type: none"> <li>• Unitary semi-presidential republic.</li> <li>• Very volatile political landscape.</li> <li>• Corruption is considered a major problem.</li> </ul>	<p><b>Economic Factors</b></p> <ul style="list-style-type: none"> <li>• 3,6% GDP growth for 2020.</li> <li>• EURO/RON rate of 4,7728.</li> <li>• 3,9 % unemployment.</li> <li>• Private investment at 20% of GDP.</li> <li>• 35 banking institutions.</li> </ul>	<p><b>Social factors</b></p> <ul style="list-style-type: none"> <li>• 7th largest population of EU.</li> <li>• Large wage increases.</li> <li>• Significant Social Scoreboard challenges.</li> <li>• Roma issue.</li> </ul>
<p><b>Technological Factors</b></p> <ul style="list-style-type: none"> <li>• The digital sector is growing mainly in Bucharest and Cluj-Napoca.</li> <li>• Favored IT outsourcing destination</li> </ul>	<p><b>Environmental Factors</b></p> <ul style="list-style-type: none"> <li>• Waste management system and potable water infrastructure are underdeveloped.</li> </ul>	<p><b>Legal Factors</b></p> <ul style="list-style-type: none"> <li>• Follows EU Regulation</li> <li>• Legislative instability</li> <li>• MARD, ANSVSA, ANPC, MOH in implementing &amp; applying food-safety national policy, as well as rights protection activities</li> <li>• National rules in agricultural and food products favor the domestic market</li> <li>• Romanian accounting standards follow the 4th and 7th EU directives</li> </ul>

### 3.2.1.1 Political Factors

Romania is a unitary semi-presidential republic, in which the executive branch consists of the President and the Government. The “Orban Cabinet” is the current government of Romania. It is a minority administration led by Ludovic Orban, the leader of the National Liberal Party (PNL), who received the support of a parliamentary majority on 4 November 2019.

Corruption in Romania is considered a major problem as it ranks 70th least corrupt country out of 180 countries (score of 44/100)<sup>24</sup>, down from the 57th place in 2017 (Figure 3.4). Key anti-corruption institutions have come under increased pressure, raising concerns about their ability to continue the fight against corruption<sup>25</sup>.

*Figure 3.4 Corruption Perception Index 2018 (source: transparency International)*



<sup>24</sup> <https://www.transparency.org/country/ROU>

<sup>25</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.7, [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)

### 3.2.1.2 Economic Factors

Romania is one of the most dynamic market in Europe with a population of 19,4 million people and a real GDP is forecast to grow by 4.1% in 2019, 3.6% in 2020 and 3.3% in 2021 (Table 3.1).

Romania's currency is "Romanian leu" (RON) with current EURO/RON exchange rate of 4.7728<sup>26</sup> (Figure 3.5). The standard corporate tax rate is 16% (source: Deloitte 2019).

Romania is having one of the highest investment ratios in the EU. In 2017, total investment accounted for 22.6 % of GDP and private investment reached 20 % of GDP, above the EU and neighboring countries' averages of 20.1 % and 20.2 % respectively<sup>27</sup>(Figure 3.6).

The labor market is under increasing stress. The lowest unemployment rate in a decade (3.9 %), a declining labor force and persistent skills shortages have brought Romania close to full employment, which makes recruitment difficult and drives wage growth<sup>28</sup>

**Table 3.1 Main features of Romania forecast** (source : EU Autumn 2019 Economic Forecast<sup>29</sup>)

	2018			Annual percentage change						
	bn RON	Curr. prices	% GDP	00-15	2016	2017	2018	2019	2020	2021
GDP	944.2		100.0	3.7	4.8	7.1	4.0	4.1	3.6	3.3
Private Consumption	589.6		62.4	5.3	7.9	10.0	5.2	5.8	5.2	5.0
Public Consumption	156.8		16.6	-0.5	2.2	4.2	1.5	3.1	3.5	2.1
Gross fixed capital formation	200.4		21.2	6.7	-0.2	3.6	-3.3	8.0	3.4	2.8
of which: equipment	70.2		7.4	5.6	-8.9	-9.9	-4.6	3.7	1.9	1.8
Exports (goods and services)	393.2		41.6	8.7	16.0	7.6	5.4	3.8	3.7	3.6
Imports (goods and services)	423.5		44.9	11.2	16.5	10.8	9.1	7.3	5.6	5.1
GNI (GDP deflator)	924.6		97.9	3.7	4.5	7.5	3.9	4.3	3.8	3.4
Contribution to GDP growth:										
Domestic demand				5.5	5.1	7.7	2.8	5.8	4.6	4.1
Inventories				-0.1	0.0	0.8	2.9	0.0	0.0	0.0
Net exports				-1.6	-0.3	-1.4	-1.7	-1.7	-1.0	-0.9
Employment				-1.5	-1.1	2.4	0.2	0.2	0.1	0.1
Unemployment rate (a)				7.1	5.9	4.9	4.2	3.9	4.2	4.3
Compensation of employees / head				16.6	15.0	14.8	16.3	13.0	9.2	7.1
Unit labour costs whole economy				10.8	8.5	9.8	12.2	8.8	5.6	3.8
Real unit labour cost				-2.0	5.9	4.9	5.9	1.4	1.0	-0.5
Saving rate of households (b)				-9.0	-9.3	-7.3	-2.3	-2.8	-2.0	-0.4
GDP deflator				13.1	2.5	4.7	5.9	7.3	4.5	4.4
Harmonised index of consumer prices				10.9	-1.1	1.1	4.1	3.9	3.5	3.4
Terms of trade goods				2.9	-1.7	-2.4	1.5	1.3	0.5	0.4
Trade balance (goods) (c)				-10.4	-5.5	-6.5	-7.3	-8.2	-8.9	-9.6
Current-account balance (c)				-5.9	-2.0	-3.4	-4.4	-5.1	-5.3	-5.4
Net lending (+) or borrowing (-) vis-a-vis ROW (c)				-4.9	0.5	-1.8	-3.2	-3.7	-3.9	-3.9
General government balance (c)				-3.3	-2.6	-2.6	-3.0	-3.6	-4.4	-6.1
Cyclically-adjusted budget balance (d)				-3.3	-2.2	-3.0	-3.1	-3.7	-4.4	-5.9
Structural budget balance (d)				-	-1.8	-3.0	-2.7	-3.5	-4.4	-5.9
General government gross debt (c)				25.2	37.3	35.1	35.0	35.5	37.2	40.6

(a) as % of total labour force. (b) gross saving divided by adjusted gross disposable income. (c) as a % of GDP. (d) as a % of potential GDP.

<sup>26</sup> <https://finance.yahoo.com/quote/euron=x/>

<sup>27</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.9, [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)

<sup>28</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.4, [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)

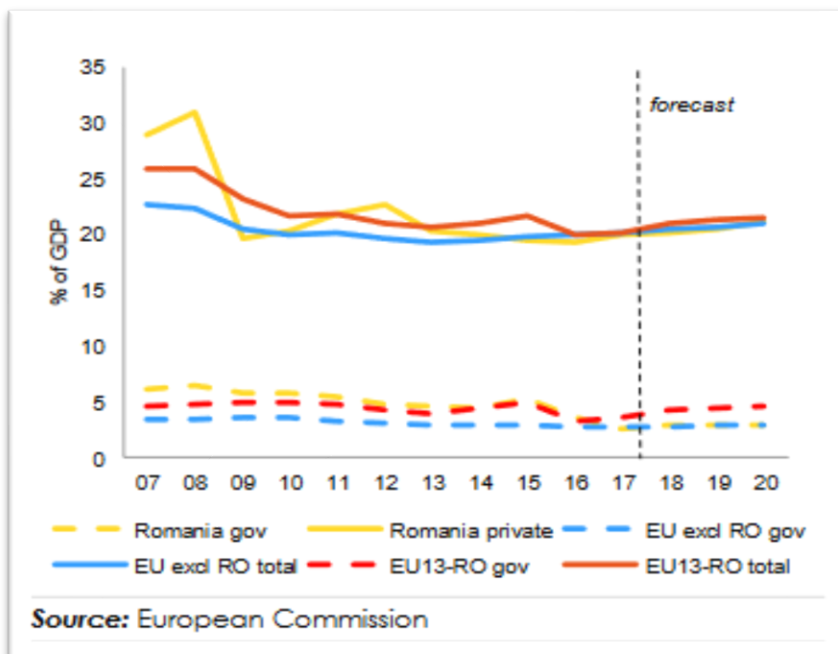
<sup>29</sup> [https://ec.europa.eu/economy\\_finance/forecasts/2019/autumn/ecfin\\_forecast\\_autumn\\_2019\\_ro\\_en.pdf](https://ec.europa.eu/economy_finance/forecasts/2019/autumn/ecfin_forecast_autumn_2019_ro_en.pdf)



**Figure 3.5 RON exchange rate adjustment** (source : yahoo finance)



**Figure 3.6 Romanian Gross fixed capital formation**



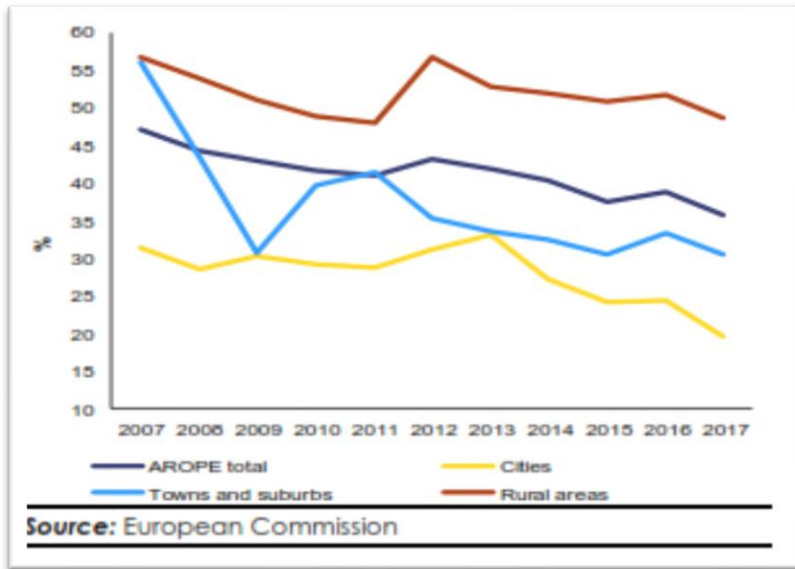
### 3.2.1.3 Social Factors

Romania has the 7th largest population of the European Union. High poverty levels are associated with unemployment, low education attainment, high intergenerational transmission of poverty and regional disparities. Poverty and social exclusion levels in rural areas are more than twice as high as those in cities (Figure 3.7) with more than 1.5 million people earn under EUR 3 per day (Friedrich-Ebert-Stiftung, 2018)



The living conditions of the Roma community are characterized by informal, unhygienic and irregular settlements. Eight in ten Roma live in a house without running water and only one in two has medical insurance.

**Figure 3.7** *People at risk of poverty or social exclusion by degree of urbanization in Romania*



Undeclared work in Romania is high, estimated to account for around one fifth of labor input. The contribution of labor to potential GDP remains low but positive, supported by the low unemployment rate and remaining untapped potential in the labor market. In almost three decades Romania lost 23.3% of its working-age population due to emigration (World Bank, 2018). Country faces a significant number of challenges in the areas covered by the Social Scoreboard supporting the European Pillar of Social Rights (Figure 3.8).

Wage increases are large, particularly in the public sector, with minimum wage to be lately increased again in January 2019 from RON 1.900 (413 €) to RON 2.080 (450 €), while a higher minimum wage of RON 2.350 (about 510 €) was introduced for people with a university degree.

Poverty rate decreased in 2017 but still remains very high with one in three Romanians to be at risk of poverty and social exclusion.

**Figure 3.8 SOCIAL SCOREBOARD FOR ROMANIA**

Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	Critical situation
	Gender employment gap	Critical situation
	Income quintile ratio (S80/S20)	Weak but improving
	At risk of poverty or social exclusion (in %)	Weak but improving
	Youth NEET (% of total population aged 15-24)	Weak but improving
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64)	Weak but improving
	Unemployment rate (% population aged 15-74)	Better than average
	Long-term unemployment	On average
	GDHI per capita growth	Best performers
	Net earnings of a full-time single worker earning AW	Weak but improving
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction	Critical situation
	Children aged less than 3 years in formal childcare	To watch
	Self-reported unmet need for medical care	To watch
	Individuals' level of digital skills	Critical situation

Members States are classified according to a statistical methodology agreed with the EMCO and SPC Committees. The methodology looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories (from "best performers" to "critical situation"). For instance, a country can be flagged as "better than average" if the level of the indicator is close to EU average, but it is improving fast. For methodological details, please consult the draft Joint Employment Report 2019, COM (2018)761 final. Data update of 29 January 2019.  
NEET: neither in employment nor in education and training; GDHI: gross disposable

### 3.2.1.4 Technologic Factors

Digitalization is a key challenge for boosting innovation and competitiveness.

The digital sector is growing, with two major hubs in Bucharest and Cluj-Napoca, contributing 6-7% to Romania's GDP. Romania has been a favored IT outsourcing destination for many years, with competitive advantages including its domestic market, which is one of Europe's fastest-growing economies (Andrew MacDowall, September 2017<sup>30</sup>)

On the other hand, Romania scores poorly on all other components of the Digital Economy and Social Index, including digital public services, digital skills of the overall population and digitalization of businesses (European Commission, 2018)<sup>31</sup>.

<sup>30</sup> <https://www.ft.com/content/a0652dba-632f-11e7-8814-0ac7eb84e5f1>

<sup>31</sup> European Commission (2018), *Digital economy and society index (DESI) 2018- Country report Romania*, <https://ec.europa.eu/digital-single-market/en/scoreboard/romania>

### 3.2.1.5 Legal Factors

The general business environment is negatively affected by legislative instability. Important legislative initiatives are often announced by the government just before adoption with limited consultation of relevant stakeholders and limited or no impact assessment<sup>32</sup>.

**Food law & Ministries:** The EU's harmonized rules and standards for food and feed are established under a general food law as from January 2002.

Ministry of Agriculture and Rural Development (MARD) is responsible for drafting and implementing the national agricultural policy, while National Sanitary Veterinary and Food Safety Authority (ANSVSA) is the main body charged with sanitary, veterinary, and food-safety activities in Romania. Additionally, National Authority for Consumers Protection (ANPC) protects consumer rights and interests by enforcing consumer-protection legislation, including food products (also regulates food labeling issues).

Ministry of Health (MOH) is responsible for overseeing the production and registration of drugs, food additives, and medical equipment for public health, as it relates to contaminants and food supplements.

Romania follows EU Regulation 2005/396 concerning the maximum pesticide residues levels (MRLs) on food or feed of plant and animal origin. ANSVSA is responsible for developing the pesticide residue programming cooperation with MARD and MOH<sup>33</sup>.

Romania applies a reduced VAT rate at 9 percent for food products and agricultural inputs (such as fertilizers and pesticides) and a standard VAT rate of 19 percent for other items.

National rules in agricultural and food products favor the domestic market, creating a barrier to trade and restricting market access from other countries<sup>34</sup>.

**Accounting principles/financial statement:** Romanian accounting standards follow the fourth and seventh EU directives. IFRS is accepted as a second set of financial statements, but only for certain companies. Banks, financial institutions and companies whose securities are traded on a regulated capital market must apply IFRS for accounting purposes<sup>35</sup>

**Corporate tax :** The standard corporate tax rate is 16% (source: Deloitte 2019)

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<sup>32</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.57 , [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)

<sup>33</sup> Food and Agricultural Import Regulations and Standards Report, 15/2/2019 : [https://agriexchange.apeda.gov.in/IR\\_Standards/Import\\_Regulation/FoodandAgriculturalImportRegulationsandStandards\\_ReportBucharestRomania2152019.pdf](https://agriexchange.apeda.gov.in/IR_Standards/Import_Regulation/FoodandAgriculturalImportRegulationsandStandards_ReportBucharestRomania2152019.pdf)

<sup>34</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.50 , [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)

<sup>35</sup> Deloitte: International Tax Romania Highlights 2019 <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-romaniahighlights-2019.pdf>

### **3.2.1.6 Environmental Factors**

- Energy intensity remains above the EU average, while recent legislative changes could hamper future investments in the energy sector.
- The waste management system is underdeveloped putting into question the achievement of the EU waste targets (European Commission, 2018).
- The water and wastewater infrastructure are deficient. Connection to the public water supply is incomplete, with only approximately 57% of the population connected, the lowest rate in the EU. Water infrastructure is being upgraded through EU co-financed regional projects of a total of EUR 2.5 billion. Considering the current low level of compliance with collection and treatment requirements, investments in the sector will remain a priority in the medium and long term<sup>36</sup>.

## **3.2.2 Customers**

### **3.2.2.1 Retailers**

Retailer sector is considered a prospectus client for private testing laboratories like AGROLAB-RDS, since they usually implement a huge number of internal quality and safety controls, including:

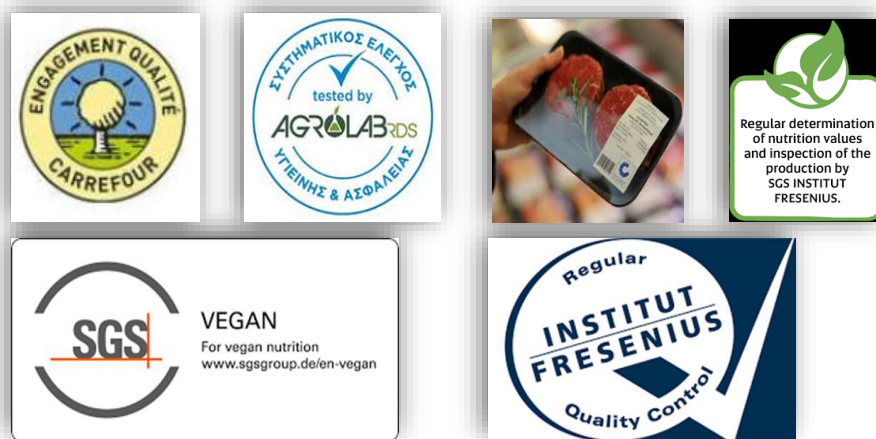
- *Label Declaration* controls.
- *Pesticide Residue* controls on fruits and Vegetables.
- *Contaminant* controls in food products.
- *Microbiology* controls in food products.

Quality is considered a main source of competitive differentiation for Retailers. Usually, applied testing controls by Retailers (especially multinational ones) surpass the domestic legislative requirements and are also commercially exploited (in many times through a strategic alliance with an independent laboratory-testing company, certification bodies or other institutions) to project an exemplary quality and safety for their private labeled food products as well as their fresh fruit & Vegetable products (Figure 3.9)

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<sup>36</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.53 , [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)

**Figure 3.9 Private laboratory's safety and quality logos/stamps for retailers**



Largest retailers in Romania market are Kaufland, Carrefour, Lidl, Auchan, Mega Image, Profi, Metro, Selgros, Peeny (Rewe) and Cora Hypermarket:

- **Kaufland**<sup>37</sup> was founded in Romania in 2005. It belongs to Schwarz Gruppe, a German hypermarket chain, and currently operates 124 stores in Romania<sup>38</sup>.
- **Carrefour SA**<sup>39</sup> is a French multinational retailer, founded in 1999, operates more than 350 stores.
- **Lidl Romania**<sup>40</sup>, also a member of Schwarz Gruppe, operates more than 230 stores, with a scheduled s growth rhythm of about 15 stores per year<sup>41</sup>.
- **Metro Cash and Carry**<sup>42</sup> is a German international retailer. Initially founded in 1996, currently operates operating 30 cash & carry stores, as well as 1.000 ‘LaDoiPasi’ franchised convenience stores<sup>43</sup>.
- **Auchan SA** is a French international retail group. It was founded in 2005 and currently operates 54 stores, 31 of which are hypermarkets<sup>44</sup>.
- **Mega Image**<sup>45</sup> belongs to Ahold Delhaize Dutch Company. It operates through a network of almost 700 stores<sup>46</sup>.

<sup>37</sup> <https://www.kaufland.ro/>

<sup>38</sup> <https://www.internationalsupermarketnews.com/kaufland-opens-two-new-stores-in-romania/>

<sup>39</sup> <https://carrefour.ro/>

<sup>40</sup> <https://www.lidl.ro/>

<sup>41</sup> <https://www.romania-insider.com/lidl-20-new-stores-romania-2019>

<sup>42</sup> <https://www.metro.ro/>

<sup>43</sup> <https://www.romania-insider.com/metro-convenience-stores-expansion>

<sup>44</sup> [https://www.auchan-holding.com/uploads/files/modules/results/1553795674\\_5c9d0a5a4ac37.pdf](https://www.auchan-holding.com/uploads/files/modules/results/1553795674_5c9d0a5a4ac37.pdf)

<sup>45</sup> <https://www.mega-image.ro/>

<sup>46</sup> <https://www.romania-insider.com/mega-image-expansion-eastern-romania>

- **Selgros**<sup>47</sup> is a large cash & carry network in Europe owned by Coop S. it was founded in 2001 in Romania and operates 22 hypermarket.
- **Penny market**<sup>48</sup>, owned by **Rewe Group**, operating around 200 discount stores<sup>49</sup>
- **Profi Rom Food SRL**<sup>50</sup>, founded in 2000, by Louis Delhaize Group, with a total of 67 discount supermarkets operating in Romania. Recently after being bought by the investing group MEP Retail Investments, Profi network has reached 1.000 locations in Romania with the intention to reach a goal of 2.000 stores in the near future<sup>51</sup>.
- **Cora Hypermarket**<sup>52</sup>, owned by Belgian Louis Delhaize Group, founded in 2002, currently operates an network of 11 hypermarkets<sup>53</sup>

The current total network of retail stores (Table 3.2 ) reflects that Romanian market is a good opportunity for the development of retail trade sector (A. Popescu, 2019) indicating a huge an attractive market for AGROLAB RDS.

**Table 3.2 Major retailers in Romania in 2018**<sup>54</sup>

Topul rețelelor internaționale de retail									
Poziție	Dinamica	Compania	Cifra de afaceri, milioane de lei			Profit net / pierdere, mil. lei		Număr de magazine	
			2018	2017	dinamică 2018 vs 2017	2018	dinamică 2018 vs 2017	2018	2017
1	=	Kaufland	10.889,96	10.086,63	8%	788,72	18%	120	116
2	=	Carrefour*	10.567,89	9.605,39	10%	226,30	80%	360	325
3	=	Lidl	7.788,91	6.510,00	20%	412,25	17%	238	220
4	↑	Profi	5.921,48	4.730,02	25%	-90,58	a trecut pe pierdere	928	696
5	↑	Mega Image	5.730,58	4.910,45	17%	254,16	26%	670	589
6	↓	Auchan	5.405,47	5.223,28	3%	35,01	-53%	52	33
7	=	Metro	5.303,12	4.729,77	12%	88,63	-24%	30	30
8	=	Selgros	3.719,98	3.645,05	2%	73,14	50%	22	22
9	=	Rewe	3.453,62	2.996,69	15%	35,97	88%	236	221
10	=	Cora	1.753,10	1.772,97	-1%	-38,97	a trecut pe pierdere	11	11
11	=	dm drogerie markt	379,90	306,21	24%	6,59	a trecut pe profit	101	91
<b>TOTAL</b>			<b>60.914,06</b>	<b>54.516,54</b>	<b>12%</b>			<b>2.768</b>	<b>2.354</b>

Sursa: Ministerul Finanțelor Publice

Note: \*Cifra de afaceri și profitul Carrefour cumulează rezultatele raportate de cele patru firme prin care grupul francez operează în retailul local: Carrefour România SA, Artima SA, Supeco Investment SRL și Columbus Operational SRL (fosta Billa România).

<sup>47</sup> <https://www.selgros.ro/>

<sup>48</sup> <https://www.penny.ro/>

<sup>49</sup> <https://www.romania-insider.com/rewe-turns-former-xxl-stores>

<sup>50</sup> <https://www.profi.ro/>

<sup>51</sup> <https://www.magazinulprogresiv.ro/stiri/planuri-ambitioase-pentru-retailerul-profi-romania-urmatorii-5-ani>

<sup>52</sup> <https://www.cora.ro/>

<sup>53</sup> <https://www.romania-insider.com/cora-expands-online-shopping-service-central-romania>

<sup>54</sup> <https://www.magazinulprogresiv.ro/articole/cum-s-reconfigurat-topul-retailerilor-internationali-2018-vezi-clasamentul>

### 3.2.2.2 Food & Beverage Industry

Food and Beverage Industry, operating in a national or multinational environment, is required to perform internal testing activities. Constant sector's needs for

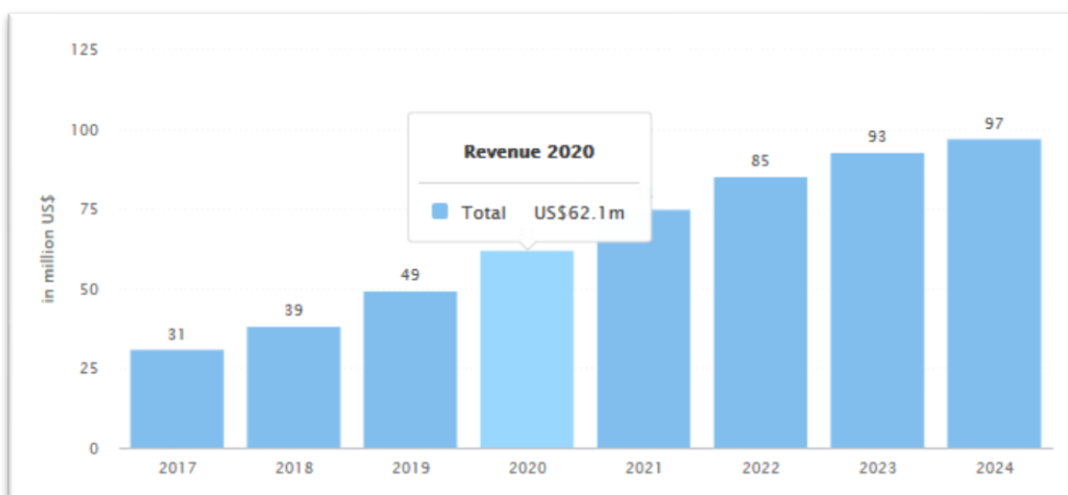
- full compliance in various (existing and upcoming) regulations on food safety,
- internal quality and safety standards and/or verifications (e.g. H.A.C.C.P., ISO 22000, IFS, BRC, FSSC 22000) ,
- research and development activities, as well as
- commercially imposed safety or quality criteria (by retailers, commercial clusters etc)

has been a traditional growth-driver for AGROLAB RDS in the areas of :

- Microbiology testing
- Organic Contaminant testing
- Allergen testing
- Mycotoxin testing
- GMO testing
- Pesticide Residue testing
- Nutritional testing
- Label Declaration evaluation.
- Heavy metal testing
- Fats & Oil testing
- Authenticity testing.
- Sensory testing.

Romania's food sector has been rapidly developing due to VAT cut from 24% to 9% and expected revenue in the Food & Beverages segment amounts to US\$ 62M in 2020<sup>55</sup> , furtherly expected to reach the amount of US\$ 97M by 2024 (Figure 3.10 )

**Figure 3.10 Revenue in the Romanian Food & Beverages segment** (source : [www.statista.com](http://www.statista.com))



<sup>55</sup> <https://www.statista.com/outlook/253/148/food-beverages/romania>



Some of the main Food and Beverage companies in Romania are listed below:

#### **Meat-processing Industry**

- *Smithfield Prod*
- *Unicarm*
- *Transavia*
- *Aaylex Prod*
- *Caroli Food*
- *Agricola International*
- *Recunostinta Prodcom Impex*
- *Elit*
- *Diana*
- *Avicola Buzau*
- *Carniprod*
- *Meda Prod 98*

#### **Ready-meals Industry**

- *Cris-Tim*
- *Scandia Food*
- *Macromex*
- *Prefera Food*
- *Ka Plus*
- *Europrod/Agricola*
- *Good People*
- *Angst*
- *Corelli Group*
- *Eisberg Romania*

#### **Dairy Industry**

- *Danone*
- *Albalact*
- *FrieslandCampina*
- *Fabrica de Lapte*

#### **Fish-processing Industry**

- *Ocean Fish*
- *Negro 2000*
- *Pescado Grup*
- *Sabiko Impex*
- *Pestisorul de Aur*
- *Costiana*
- *Doripesco*

#### **Beer Industry**

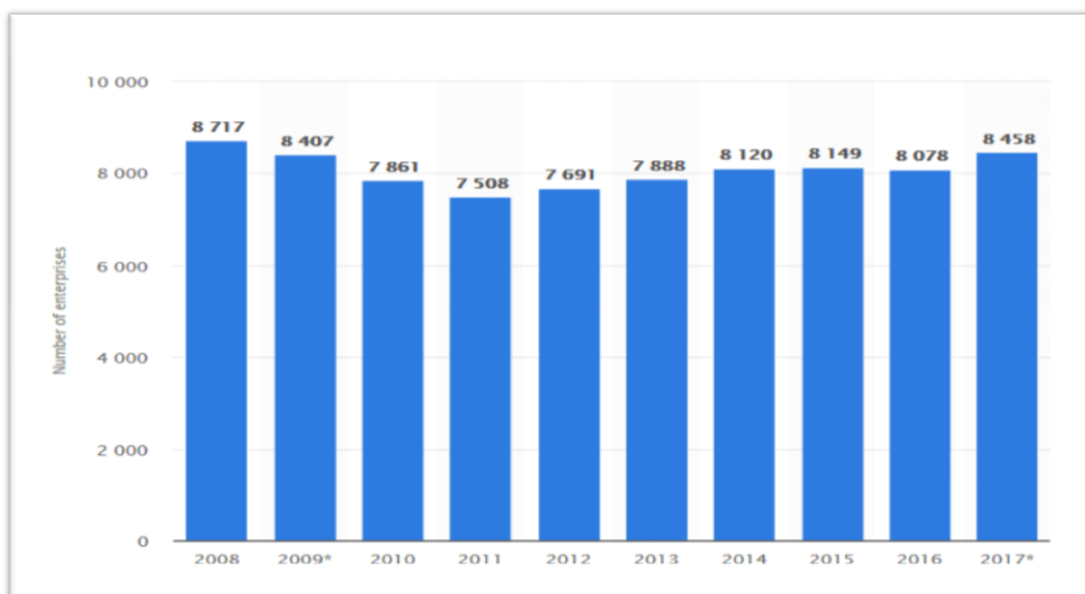
- *Ursus Breweries*
- *Heineken Romania*
- *Bergenbier*
- *United Romanian Breweries Bereprod (URBB)*

#### **Wine Industry**

- *Cotnari*
- *Cramele Recas*
- *Jidvei*
- *Cramele Halewood*
- *Vincon*
- *Tohani*

**Figure 3.11** Number of enterprises in the manufacture of food products industry in Romania

(source: [www.statista.com](http://www.statista.com) )





### 3.2.2.3 Agriculture

Agriculture sector is another major market segment for AGROLAB RDS, again due to require-to-maintain quality and safety standards and/or certifications by farmers and cooperatives (e.g. GLOBALG.A.P.), as well as by Packing houses and retailers (e.g. ISO 22000).

Romania is a traditional agricultural country and plays a unique and important part in European agriculture. The soil is fertile, and the climate is favorable for agriculture, animal husbandry and horticulture. Romania has an agricultural area of approximately 15 million *ha*, out of which around 10 million *ha* are devoted to arable crops (Figure 3.12). Thus, Romania is (after Poland with 17 million *ha* of agricultural area) the second largest producer of agricultural products in the CEE region.

The agriculture sector, dominated by small, domestic holdings, is characterized by very low levels of productivity, which means that Romania is not able yet to fully exploit its significant agricultural potential. Romanian organic land (2018 data) is estimated at 326.259 *ha*, representing a total of 9.008 certified operators<sup>56</sup> (Figure 3.13). Consumers perception toward organic agricultural products seem not to be influenced by age, gender, income, or education level (Munteanu, Istrate, Vasile Stoleru , 2019)

Additionally, Romania is a grain exporter competing with its Black Sea neighbor zone. Constanta port is the main gate for agricultural transportation, with a continuously expanding storage capacity (Figure 3.14), a fact that also promotes an increased rate of testing controls.

Applied testing controls mainly include :

- *Pesticide Residue* testing
- *Soil analysis* testing
- *GMO* testing
- *Heavy metal* testing

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<sup>56</sup> <https://www.madr.ro/agricultura-ecologica/dinamica-operatorilor-si-a-suprafetelor-in-agricultura-ecologica.html>

**Figure 3.12 Crop production in Romania** (source: *FLANDERS INVESTMENT & TRADE SURVEY*<sup>57</sup>)

	thou tonnes			
	2013	2014	2015 <sup>1)</sup>	2016 <sup>2)</sup>
Cereals for grains	20897	22071	19333	21765
of which:				
Wheat	7296	7585	7962	8431
Rye	24	24	24	26
Barley and two-row barley	1542	1713	1626	1817
Maize grains	11305	11989	9021	10746
Leguminous plants for beans	74	71	76	99
Potatoes	3290	3519	2700	2690
Sugar beet	1029	1399	1041	1012
Oilseed crops	2967	3461	2975	3597
of which:				
Sunflower	2142	2189	1786	2032
Vegetables <sup>3)</sup>	3961	3802	3674	3358
Fruit <sup>4)</sup>	1300	1301	1225	1242
Grapes <sup>4)</sup>	992	784	799	737

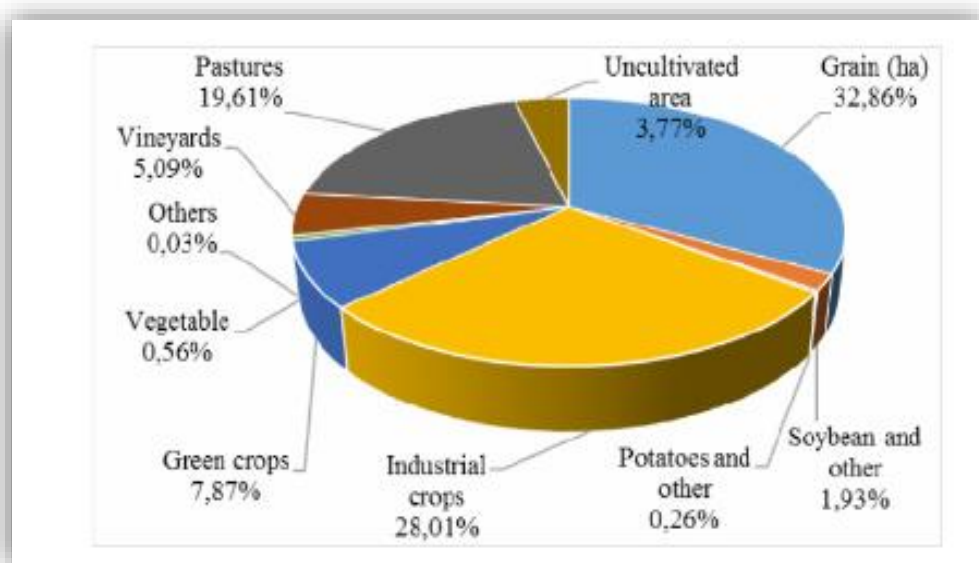
<sup>1)</sup> Rectified data as against those previously published.

<sup>2)</sup> Provisional data.

<sup>3)</sup> Including the production of kitchen gardens, greenhouses, solaria, combined and successive crops.

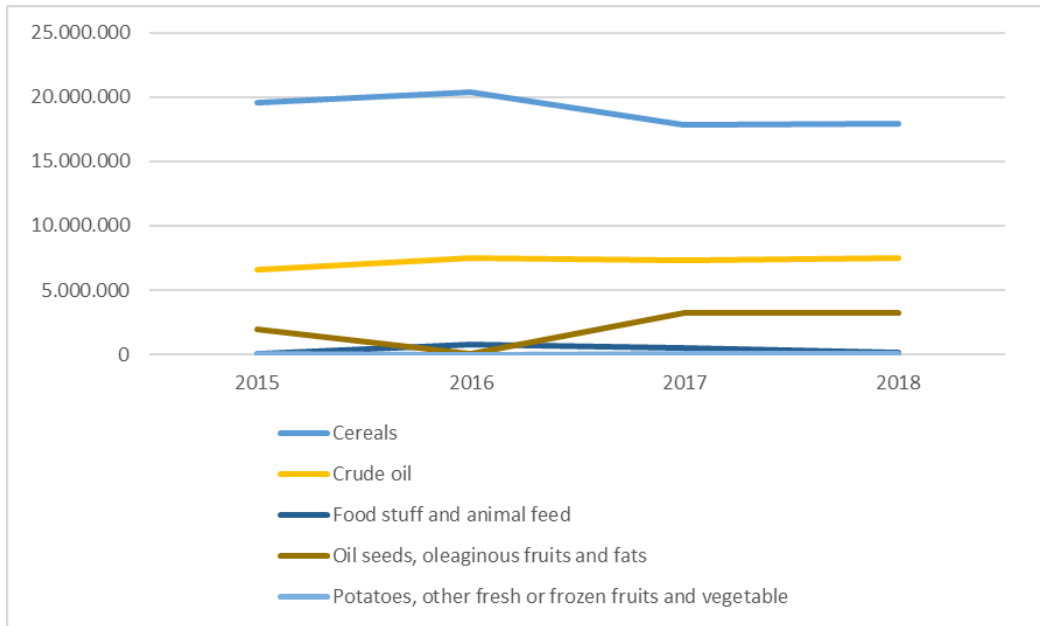
<sup>4)</sup> Including the production of kitchen gardens.

**Figure 3.13 Share of Organic crops in Romania in 2017** (source : *MARD, 2019*)



<sup>57</sup> [https://www.flandersinvestmentandtrade.com/export/sites/trade/files/market\\_studies/2017\\_Agriculture\\_Romania.pdf](https://www.flandersinvestmentandtrade.com/export/sites/trade/files/market_studies/2017_Agriculture_Romania.pdf)

**Figure 3.14 Agriculture Traffic (tonnes) 2015 – 2018 in Constanta Port** (source : [www.portofconstantza.com](http://www.portofconstantza.com))<sup>58</sup>



### 3.2.3 Company: AGROLAB RDS’ Current Positioning in TICS Romania Market.

In contrast with global market’s “big players”, who operate in all segments of the Testing, Inspection and Certification market, AGROLAB RDS basically operates in a specific segment of TICS market including only in the laboratory testing sector, and focuses mainly in the Agricultural, the Food & Feed and the Environmental Protection areas. Although AGROLAB RDS can offer consulting and sampling services, on demand, it is not engaged in the Auditing, Inspection, Verification, Quality assurance and Certification sectors of the TICS market.

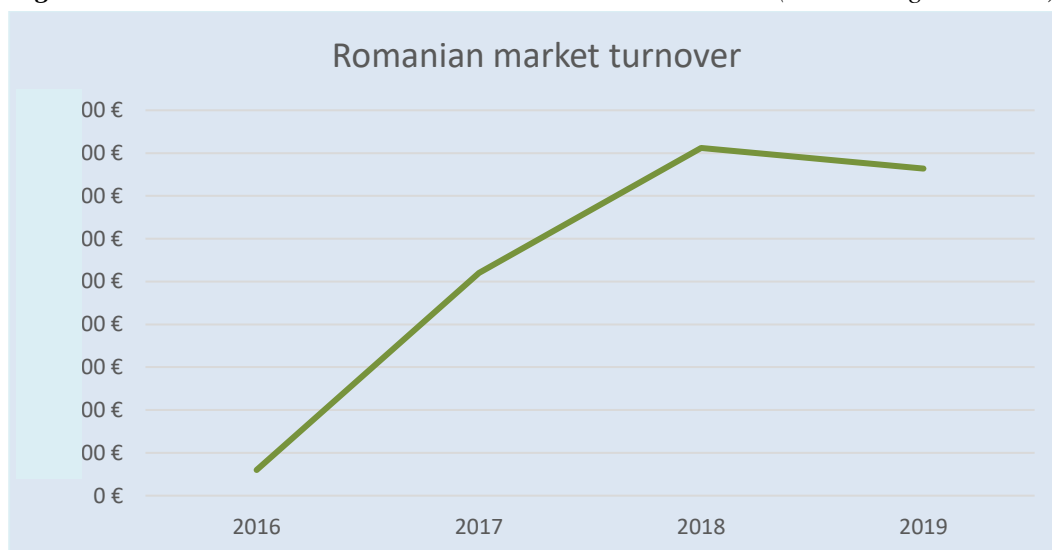
AGROLAB RDS already has a significant portfolio in the Romania TICS market, directly collaborating with one of the largest retailer company as well as with the largest domestic private laboratory (Figure 3.15).

Current business operations in the Romanian market only involve only remote sale support from AGROLB RDS-Greece’s commercial department, while all offered testing services are conducted by AGROLAB RDS-Greece, by sample dispatch from the clients. This sets significant competitive constrains for further sales volume increase since the practice of sample dispatching in Greece bears additional costs

<sup>58</sup> [https://www.portofconstantza.com/apmc/portal/static.do?package\\_id=st\\_dt\\_gr\\_marfa&x=load](https://www.portofconstantza.com/apmc/portal/static.do?package_id=st_dt_gr_marfa&x=load)

and extended turnaround time for results<sup>59</sup>. Additionally, the lack of a domestic sales and customer service activity makes impossible to strategically and intensively penetrate the rest of the Romanian market. On the other hand, Romania is considered a developing country for the TICS market with approximately seventeen, significantly sized ,private laboratories already operating and rapidly developing, with seven of them to be subsidiaries of multinational TICS companies (SGS, CONTROL UNION, WESSLING, HAMILTON, EUROFINS, COTECNA, ALS).

**Figure 3.15** *AGROLAB RDS’ turnover in Romanian market* (source : Agrolab RDS)



**Table 3.3.** *number of samples and average Agrolab RDS’ selling prices per sample in Romania market vs total company’s average prices* (source : Agrolab RDS)

Type of laboratory testing service	Romanian market			total AGROLAB RDS
	Nr. of Samples	Turnover	Average price 2019	Average price 2019
Microbiological testing				
GMO testing				
Pesticide Residue testing				
Mycotoxin testing				
Fats & Oils testing				
Organic & Inorganic Contaminants testing				
Nutritional analysis testing				
Heavy metals, Food preservatives				
Sensory testing				
Soil testing				
Plant Protection Products & Fertilizers testing				

<sup>59</sup> **turnaround time (TAT)** means the amount of time taken to complete a process or fulfill a request

### 3.2.4 Competition Landscape

Examined competition is composed by private laboratories that are operating in the same, as AGROLAB RDS, client and services segmentations, offering comparable accreditation ability and range of laboratory testing services.

#### 3.2.4.1 Existing Domestic Competition

Domestic competition consists of local laboratories primary located in Bucharest (country's capital) and Constanta, which is country's largest port. Main potential competitors are considered to be the following companies, as presented in Table 3.4 , while detailed financial and accreditation data are presented in Appendix I.

- ALMARO MED
- BACTOLACT
- INDUSTRY LAB
- CARTARE AGROCHIMICA INDUSTRY LAB
- J. S. HAMILTON ROMANIA
- MANOR LABORATORY CENTER
- WESSLING Romania
- BIOSANIVET
- I.M.U. LABORATORIES
- CONTROL UNION ROMANIA
- ECO LAB
- GIVAROLI IMPEX
- ICA Research & Development
- COTECNA
- EUROFINS FOOD TESTING
- SGS ROMÂNIA
- ALS LIFE SCIENCES ROMANIA

Similar to AGROLAB RDS' business model, above mentioned potential competition is deeply engaged in chemical and microbiological laboratory testing in Water, Soil and Food. During the 5-year period between 2014 and 2018 market share for this domestic competition was increased (revenue increase) by 18% or ~6,0 M Euros (Figure 3.16)

According to established accreditation scope, existing competition can be characterized either as:

- i. Basic, offering easy-to-develop testing services, such as:
  - *Microbiological and basic Chemical testing services in Water, Food and Feed*or
- ii. Competitive, offering additional testing services that more sophisticated and generally require specialized equipment, previous existing scientific experience and extend finance to be developed, such as :
  - *Chemical & Contaminant indicators in Food, Feed, Water, Soil & Wastewater*

**Table 3.4 Potential domestic competition** (source : <https://www.romanian-companies.eu> & <https://www.renar.ro> )

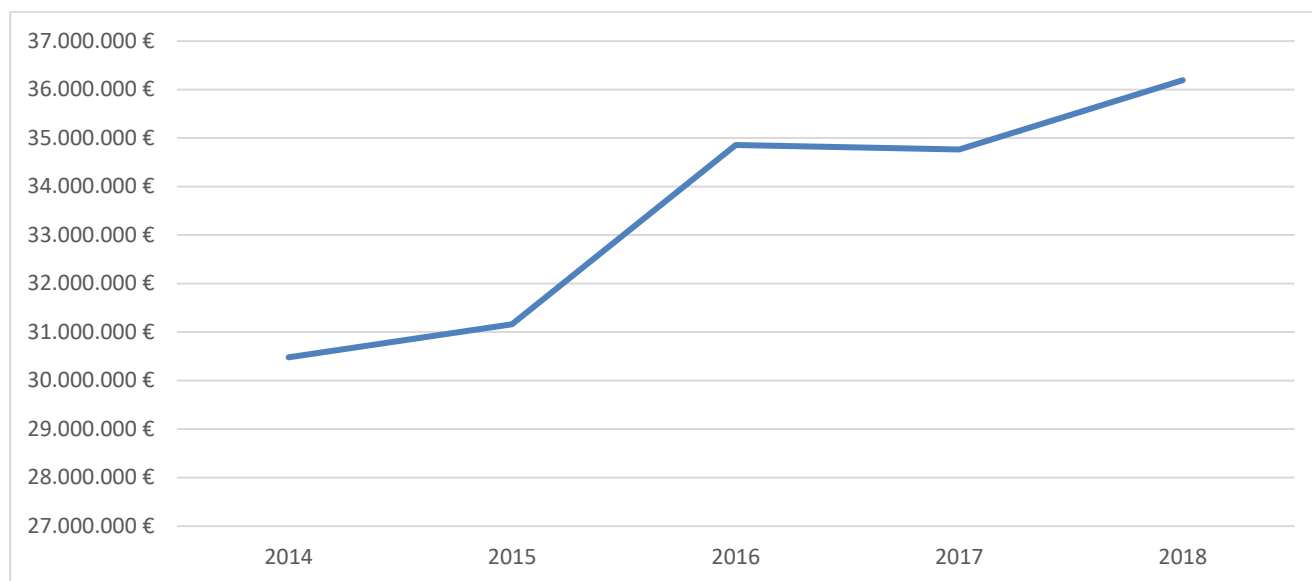
Company's Name	Location	Establishment	Number of employees	Turnover, in K € (2018)	Estimated Net Profit, in K € (2018)	Accreditation	Accreditation Scope	scope evaluation
ALMARO MED SRL*	Bucharest	2005	11	190 €	- 41 €	Water Food	Water: 24 physicochemical indicators & 7 microbiological indicators Food : 14 microbiological indicators	basic
BACTOLACT SRL*	Bucharest	1991	14	246 €	6 €	Water Food	Water & Food: 36 physicochemical & microbiological indicators Food : 14 microbiological indicators	basic
CARTARE AGROCHIMICA SRL*	Bucharest	2014	11	725 €	370 €	Soil Fertilizers & Soil sampling	11 physicochemical indicators	competitive
INDUSTRYLAB SRL*	Bucharest	2009	14	345 €	57 €	Water Food	14 microbiological indicators	basic
J. S. HAMILTON * ROMANIA SRL	Bucharest	2014	14	859 €	29 €	Water Food	48 Microbiological indicators in Food, Water, Air	competitive
	Cluj-Napoca (North Romania)							
MANOR LABORATORY CENTER SRL*	Bucharest	2006	15	228 €	16 €	Food	18 Chemical & Nutritional indicators in Food & 15 Microbiological indicators in Food,	basic
WESSLING Romania SRL*	Mures	2003	79	1.880 €	69 €	Water , Soil Wastewater Food	91 Chemical & Contaminant indicators in Water, Soil & Wastewater 40 Chemical indicators in Food	competitive
BIOSANIVET SRL*	Constanta	2006	7	112 €	4 €	Food	21Chemical , Nutritional & Microbiological indicators in Food,	basic
ECO LAB CONSULT SRL*	Bucharest	2003	12	342 €	70 €	Water	51 Chemical & Contaminant indicators in Water + 13 chemical indicators in Gaseous effluents	competitive
ICA Research & Development (ICA R&D) SRL*	Bucharest	2009	52	1.580 €	162 €	Water Food	total 70 Chemical, Contaminant & Microbiological indicators in Food & Water + expected (after 2020) : - Pesticide residue testing - Contaminant testing - GMO testing	competitive
EUROFINS FOOD TESTING SRL*	Bucharest	2016	14	136 €	- 327 €	pending (expected within 2020)	expected (within 2020) : - Chemical & Nutritional Testing - Microbiology testing - Pesticide residue testing - Contaminant testing - GMO testing	competitive
I.M.U. LABORATORIES SRL*	Bucharest	2007	5	169 €	- 62 €	Water, Soil	19 accredited chemical indicators in water	basic
CONTROL UNION ** ROMANIA SRL Inspection	Constanta	2002	169	4.390 €	546 €	Cereals + inspection activities	specific accredited chemical indicators in Cereals + GMO indicators	competitive
GIVAROLI IMPEX SRL**	Bucharest	1992	20	622 €	85 €	Water , Soil + non-Food testing	68 Chemical & Contaminant indicators in Water & Soil + 27 chemical indicators in Gaseous effluents	competitive
COTECNA / TIMEX SURVEYORS SRL Inspection**	Constanta	1997	133	5.722 €	1.268 €	Cereals + inspection activities	specific accredited chemical indicators in Cereals + GMO indicators + Pesticide residues indicators	competitive
ALS LIFE SCIENCES ROMANIA SRL**	Ploiești	1992	28	928 €	135 €	Water, Soil + non-Food testing	accredited chemical indicators in Water & Soil	competitive
SGS ROMÂNIA SA**	Constanta	1992	496	16.409 €	695 €	Oil seeds, Cereals, Flour + non-Food testing +Inspection activities	Specific accredited chemical indicators in Cereals & Oil seeds + Pestiside residue and Mycotoxin analysis	competitive
	Brazi						32 accredited indicators in water	
Turnover sum 1 *				6.812 €				
Turnover sum 2 **				28.071 €				
Total Competition Turnover				34.883 €				

\* competition offering only Food, Feed & Soil testing services

\*\* competition additionally offering Inspection, Consulting & Non-Food analysis services

**Figure 3.16 Total revenue of potential domestic competition during the last 5 years**

(source <https://www.romanian-companies.eu>)



#### **3.2.4.2 Constrains in evaluating competition**

Mentioned anticipated domestic competition officially declared a combined revenue of ~34 M Euros for F.Y. 2018. This amount surely does not represent the current targeted market size for AGROLAB RDS, since certain constrains seem to exist:

- Five (5) competitors (*SGS ROMÂNIA SA, COTECNA / TIMEX SURVEYORS SRL, GIVAROLI IMPEX SRL, CONTROL UNION SRL Inspection and ALS LIFE SCIENCES ROMANIA SRL*), declaring a total turnover of ~28 M Euros, are also engaged in TIC services out of the current scope of AGROLAB RDS, such as Non-Food testing, Inspection and Certification services. The exact turnover contribution for these services is not available, through data bases or official financial reports, and only an estimation can take place. Based on existing business experience, competitor's number of employees and their testing accreditation scope, this business plan assumes that these additional services produce the majority of their revenue, in a different, for each competitor, percentage (see Table 3.5)
- Seven (7) competitors belong to multinational groups (*WESSLING Romania SRL, J.S. HAMILTON ROMANIA SRL, EUROFINS FOOD TESTING SRL, SGS ROMÂNIA SA, CONTROL UNION ROMANIA SRL, COTECNA / TIMEX SURVEYORS SRL, ALS LIFE SCIENCES ROMANIA SRL*) and may possibly offer a more extend range of laboratory testing services, not currently included to their Romanian accreditation scope but supported by subcontracting assigns to other accredited European laboratory infrastructures within their group.

Furthermore, it is not obvious whether the revenue from these subcontracting assigns appear as revenue in their official turnover or appear as revenue for the parent company (if such case exists, the real market share for these competitors shall be bigger than the one estimated through their official stated in their reports)

- Table 3.5 does not consider any additional out-of-the-border competition (similar to the current remote business model of AGROLAB RDS) and its current market share. AGROLAB RDS currently ranks in 8<sup>th</sup> place in terms of revenue achievement compared to anticipated domestic competition (Figure 3.17). I would be logical to assume (and needs to be investigated) that other “Big TICS players”, not locally established, may also have worth-to-mention portfolios in the Romania market (e.g. INTERTEK, SYNLAB, etc).

### **3.2.4.3 Market size estimation**

As stated above, total domestic competition’s turnover of ~34,8 M Euros (2018 data) also includes operations and services not in the scope of AGROLAB RDS. Table 3.5 presents the estimated market size for AGROLAB RDS, taking concern the estimated revenues occurring only form laboratory testing services , similar to the ones AGROLAB RDS offers.

Estimation of Romania market size is around 12,4 M Euros, with AGROLAB RDS to possess ■% of this targeted market, ranking in 8<sup>th</sup> place in terms of revenue achievement.

### **3.2.5 Collaborators**

Currently AGROLAB RDS does not have any collaborators in the Romania market. Any market penetration should involve seeking of opinion-maker entities which would help the company to rapidly and effectively promote its services. A critical issue to notice is that all potential collaborators could also be potential AGROLAB RDS’s client or/and other TICS operators not directly competitive to laboratory testing segment, like Consultants, Certification bodies as well as significant clients (e.g. retailers), usually demanding

- Specific Quality standards (certifications and accreditations)
- One stop-shop service (access to an extended variety of laboratory testing services).
- Price flexibility
- Commission alternatives



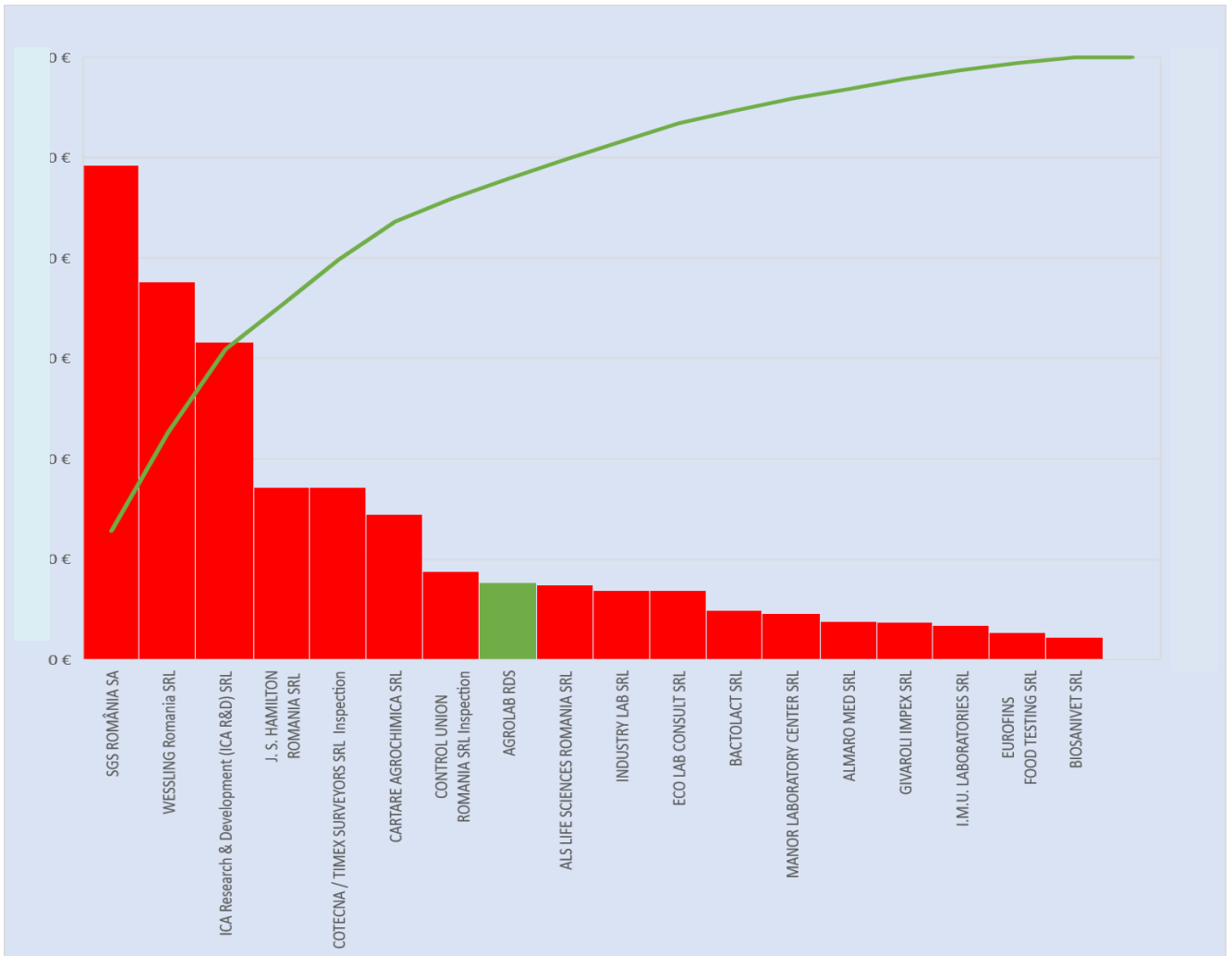
**Table 3.5 Estimated Market Size**

Company's Name	Location	Turnover , in K € (2018)	scope evaluation	estimation of Water-Food-Feed testing services contribution to compeny's turnover	Water-Food-Feed testing services estimated turnover in K € (2018)
ALMARO MED SRL*	Bucharest	190 €	basic	100%	190 €
BACTOLACT SRL*	Bucharest	246 €	basic	100%	246 €
CARTARE AGROCHIMICA SRL*	Bucharest	725 €	competitive	100%	725 €
INDUSTRY LAB SRL*	Bucharest	345 €	basic	100%	345 €
J. S. HAMILTON * ROMANIA SRL	Bucharest Cluj-Napoca (North Romania)	859 €	competitive	100%	859 €
MANOR LABORATORY CENTER SRL*	Bucharest	228 €	basic	100%	228 €
WESSLING Romania SRL*	Mures	1.880 €	competitive	100%	1.880 €
BIOSANIVET SRL*	Constanta	112 €	basic	100%	112 €
ECO LAB CONSULT SRL*	Bucharest	342 €	competitive	100%	342 €
ICA Research & Development (ICA R&D) SRL*	Bucharest	1.580 €	competitive	100%	1.580 €
EUROFINS FOOD TESTING SRL*	Bucharest	136 €	-	100%	136 €
I.M.U. LABORATORIES SRL*	Bucharest	169 €	basic	100%	169 €
CONTROL UNION ** ROMANIA SRL Inspection	Constanta	4.390 €	competitive	20%	878 €
GIVAROLI IMPEX SRL**	Bucharest	622 €	competitive	30%	187 €
COTECNA / TIMEX SURVEYORS SRL Inspection**	Constanta	5.722 €	competitive	20%	1.144 €
ALS LIFE SCIENCES ROMANIA SRL**	Ploiești	928 €	competitive	60%	557 €
SGS ROMÂNIA SA**	Constanta Brazi	16.409 €	competitive	15%	2.461 €
	-		-		
<b>Total direct competitors turnover</b>		<b>34.883 €</b>			
<b>Turnover concerning Water-Food-Feed testing services (estimated)</b>					<b>12.421 €</b>

\* competition offering only Food, Feed & Soil testing services

\*\* competition additionally offering Inspection, Consulting & Non-Food analysis services

**Figure 3.17 Estimated Romania private laboratory testing market size in K €**



## 4. SWOT analysis

A formulation of a realistic business plan will have to first identify and consider all internal and external factors that could affect the new subsidiary's establishment and future performance. Evaluating all internally originated Strengths and Weaknesses of the company in comparison with external environment's Opportunities and Threats will create a realistic assumption for the success of the project and prevent strategic blunders. S.W.O.T. analysis is presented in table 4.1, an containing the following aspects:

**Table 4.1 SWOT analysis**

INTERNAL FACTORS	
STRENGTHS (+)	WEAKNESSES (-)
<ul style="list-style-type: none"> <li>• <b>Technical Ability &amp; Know-how</b></li> <li>• <b>Dedicated Commercial Department</b></li> <li>• <b>Current presence in the Romanian market</b></li> <li>• <b>Laboratory Network</b></li> <li>• <b>Finance</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Human Resources and IHRM</b></li> <li>• <b>Distance</b></li> <li>• <b>Commercial Policy Flexibility</b></li> </ul>
EXTERNAL FACTORS	
OPPORTUNITIES (+)	THREATS (-)
<ul style="list-style-type: none"> <li>• <b>Target Market's size</b></li> <li>• <b>Further Development of the group</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Competition</b></li> <li>• <b>Investment Risk</b></li> <li>• <b>Accreditations, Certifications &amp; Licenses</b></li> <li>• <b>Rising Labor cost</b></li> <li>• <b>Global economic depression</b></li> </ul>

## 4.1 Strengths

The existing network, know-how and business structure of AGROLAB RDS is the most important strength in formulating a new subsidiary.

### Technical Ability & Know-how

Company has an incredible long-term technical experience and know-how which can be vital to overcome all technical challenges of establishing, method validating and efficiently operating any new laboratory testing facility. Any testing service, currently performed by AGROLAB RDS, can be easily replicated (in terms of applied-method-selection and analytical-equipment-selection) and successfully validated (in terms of ISO 17025 accreditation certification) while technician recruitment and training procedure can be efficiently undertaken and supported by a large number of existing technical managers.

The significant number of accreditations and certifications (section 2.3.2) which the organization holds, will enhance subsidiary's technical capability and additionally promote its efficiency to existing and potential clients.

Existing IT infrastructure (LIMS, SAP) can be easily applied to the new established facility and assure real time information, integration and monitor ability not only between the new company and its clients but also between the new company and the rest of group's laboratory network as well.

### **Dedicated Commercial Department**

AGROLAB RDS incorporates a centralized and experienced Sales and Marketing department, efficiently serving a large and very differentiated client portfolio (from private multinational companies to small or medium sized local companies and from State organizations to private research centers). This already existing Sales and Marketing team can investigate, evaluate and offer a direct market feedback on current and upcoming trends in the Romania market, providing vital information for company's domestic client network development and sales strategy, as well train local sales representatives to locally support the project.

### **Current presence in the Romanian market**

The fact that AGROLAB RDS successfully maintains a mentionable current portfolio - and good reputation - in the Romanian market ensures business operations from day-one. It also indicates that current provided services and applied commercial policies/strategies are market adequate for a rapid further portfolio development.

### **Laboratory Network**

Regardless the decided size of the investment in the country (in terms of infrastructure size, number and category of locally developed testing methods and services etc), the new subsidiary will be able to offer to the Romania market all current available services within AGROLAB RDS and/or TENTAMUS-group network, by directly subcontracting any required service that will not be locally developed. This will give the company the strategic advantage of approaching the Romania market as a one-stop shop offering a great variety of advanced and reliable testing services.

### **Finance**

The current performance of the AGROLAB RDS is encouraging in supporting the necessary financing activities in the country. Additionally, a possible, direct or indirect, financial engagement of TENTAMUS-group, may offer required fund required with possible more attractive repayment terms, in support of the project.

## 4.2 Weaknesses

Efficient support of the project is perhaps the major weakness, since it will face Human Resource as well as distance issues.

### *Distance*

Despite AGROLAB RDS' existing network, the new established company will only up-to-a-point and by distant assistance be supported. Due to existing physical distance any supporting transition should be scheduled and organized in advance, while in case of potential crisis immerge an in-person support will possible not be available nor in terms of rapid response or in terms of presence duration.

### *Human Resources and IHRM support*

AGROLAB RDS up to now has a minimum experience of intensive collaboration with different cultures and mentalities. Establishment of a new Romanian based laboratory will be the first time that the organization will have to manage a significant number of non-Greek employees and customers as well as to support possible expatriate procedures for existing employees (supporting the project).

The difference of environment, culture and ethics background can be challenging in terms of cross-cultural issues. In such cases, a more complex and more challenging (that the one currently exists) human capital management will be necessary. An updated International Human Resource Management (IHRM) should be applied (Stone, 2008) that can be both practical and effective in supporting whole group's multinational network. Current lack of such IHRM could be a great challenge in case that existing managers would be needed to be relocated in the Romania market (long duration or short duration expatriation activity), to provide know-how and support the project. Failure in choosing the right expatriate candidate and failure for these candidates to fit in both to business' and country's ("country culture") standards, could have a significant effect to the success of the project.

### *Commercial policy flexibility*

AGROLAB RDS may find it hard to compete with the domestic big or medium size competitors, who may apply more flexible commercial policies while they already maintain personal relations with the domestic market. As recently joined to a globalized organization (TENTAMUS-group), it seems difficult to follow and apply in extent more flexible commercial polices (in terms of discount and credit control aspects) that the ones that current TENTAMUS-group status obliges. Additional practical difficulty on this would surely be that proposed start-up project will have certain internal constrains in terms of

required-to-be-achieved financial performance (cash flow, EBITDA etc) during the first 5 years horizon of the investment, which could end up to less flexible discount and credit control policy.

### 4.3 Opportunities

#### Target Market's size

In general, TICS market is expected to continue to grow by 6% CAGR until 2024<sup>60</sup> and still there is a lot of space for global market penetration, since top 10 players account for less than 40% of the total TICS market<sup>61</sup>. Romania market, in specific, is a very potential market with a constant GDP growth forecast<sup>62</sup>. AGROLAB RDS's Target Market is estimated at 12,4 M Euros, with a significant number of multinational laboratories already to see and exploit this opportunity for the last 6 years (see Appendix I).

#### Trends in analytical practices

Globalized safety trends are expected to more and more focus in consumer's health and protection while becoming more "sensitive" and restrictive concerning possible uprising food scares (Recent examples are the "Horse meat scare" during 2013<sup>63</sup> and the "Fipronil scare" in eggs during 2017<sup>64</sup>). As technology is evolving and legislation is becoming stricter, innovating develops of new and updated analytical practices and services will be constantly required by the markets. Such methods always bear high operating costs and most of the times require dedicated R&D departments, something that medium or small size competition cannot undertake. Eventually, the majority of TICS segments will only be "available" to big multinational players. AGROLAB RDS's current size and resources, additionally supported by TENTAMUS group, can create a difference in current field of competition.

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<sup>60</sup>Testing, Inspection, and Certification Services Market Key Information By Top Key Player SGS SA, Bureau Veritas, Intertek, DEKRA, Eurofins, TUV SUD, DNV GL, TUV Rheinland, Applus, SYNLAB, TUV Nord, LR, ALS, SOCOTEC, Corelab, Kiwa Group, RINA, Apave : <https://www.openpr.com/news/1532960/Testing-Inspection-and-Certification-Services-Market-Key-Information-By-Top-Key-Player-SGS-SA-Bureau-Veritas-Intertek-DEKRA-Eurofins-TUV-SUD-DNV-GL-TUV-Rheinland-Applus-SYNLAB-TUV-Nord-LR-ALS-SOCOTEC-Corelab-Kiwa-Group-RINA-Apave.html>

<sup>61</sup>TIC outlook 2018 – Barclays, <https://www.barclayscorporate.com/content/dam/barclayscorporate-com/documents/insights/industry-expertise/Testing-Report-2018.pdf>

<sup>62</sup>[https://ec.europa.eu/economy\\_finance/forecasts/2019/autumn/ecfin\\_forecast\\_autumn\\_2019\\_ro\\_en.pdf](https://ec.europa.eu/economy_finance/forecasts/2019/autumn/ecfin_forecast_autumn_2019_ro_en.pdf)

<sup>63</sup>[https://en.wikipedia.org/wiki/2013\\_horse\\_meat\\_scandal](https://en.wikipedia.org/wiki/2013_horse_meat_scandal)

<sup>64</sup>[https://en.wikipedia.org/wiki/2017\\_Fipronil\\_eggs\\_contamination](https://en.wikipedia.org/wiki/2017_Fipronil_eggs_contamination)

### **Further geographical expansion of the group**

A new laboratory facility in Romania can become the “vehicle” for further business penetration and development in the Balkans, for the near future. A successfully established, self-managed, laboratory infrastructure in Romania could easily support neighbor countries’ demands not only in existing markets (e.g. North-East Bulgaria region) but also in new targeted ones (e.g. Hungary and Moldova, Serbia and Ukraine) at the time that they will become mature for business development. For example Serbia, currently a non-EU country, is expected to join EU sometime after 2025<sup>65</sup>, meaning full EU legislation adoption (expected to cause an intense laboratory testing activity) and open border/custom-free status with other EU countries.

## **4.4 Threats**

### **Accreditations, Certifications & Licenses**

AGROLAB RDS’ domestic establishment, smooth operation and market penetration rely crucially in acquiring and maintaining certain operation approvals, licenses and accreditation. Possible failure to in-time obtain and maintain such requirements would produce extra costs (extent subcontracting activities due to inability to locally perform laboratory testing services) and reflect a direct message of technical incapability to client’s perspective leading to reputation damage and loss of current and future customers.

### **Competition**

Competition is the most significant threat. TICS big and medium players (*WESSLING, J. S. HAMILTON, EUROFINS, SGS, CONTROL UNION, COTECNA, ALS*) have already been established the market and are expected to further compete in achieving the biggest possible market share. Such extreme competition may lead to price reduction and effect profitability for a domestic AGROLAB RDS branch.

### **Investment risk**

AGROLAB RDS could be crucially financially affected from a possible market penetration failure. Capital and profit loss not only will affect subsidiary’s profitability and survival but could also affect future funding availability on other future upcoming investment projects of the group.

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<sup>65</sup> <https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/20190529-serbia-report.pdf>

### **Romanian rising labor cost**

Rising labor costs trend may affect company's profitability and its ability to compete locally or internationally. Wage increases, grown on average 8,1 % annually since 2016 and having outpaced productivity growth, combined with the gradual depreciation of the national currency<sup>66</sup>, may have future impact on company's cost competitiveness.

### **Global economic depression**

Global economic depression is always a threat since governments or private companies may reduce current controls due to insufficient budget, causing a decrease of group's yearly turnover.

## **5. Strategy**

New-established Romanian company must stay aligned with current group's vision and mission statement during its internal growth and development.

### **Mission Statement**

AGROLAB RDS provides laboratory and advisory solutions through **quality excellence, reliability and continuous development**, aiming at offering to its customers and the market excellent services that fully cover their needs at reasonable prices, while providing a **fair profit** to the shareholders.

The key elements in achieving the Mission Statement are the core values of the company and its employees who are:

- Quality as a competitive advantage
- Innovation as a driving force for growth
- The customer service as a priority
- Clear superiority and maintenance of the high reputation of the company as a guide

Potentials of the Romanian market makes it favorable for an aggressive strategic penetration. Growth strategy will focus on the creation of an independent, fully autonomous, self-managed domestic laboratory infrastructure, with a high percentage of internally produced high quality services. Development strategy will aim for the new start-up company to

- Achieve a successful market penetration from day-one and become one of the five top players in the domestic market within the first five years of operation, offering one-shop-stop services.
- Become a start-base for further group's development and expansion to the rest of the Balkan laboratory testing market after year four of successful operation

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<sup>66</sup> Country Report Romania 2019 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, p.6 , [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf)



## 5.1 Target Market

Company shall be in position to offer one-stop shop services for local Retailers and Food and Beverage Industries, who require reliable and sophisticated laboratory testing services, including microbiological, nutritional and contaminant testing. The example of organization's current business operation, especially in strategically collaborating with the Retailer sector, has shown that these market segments can provide increased and sustained turnovers in supporting constant growth for a testing laboratory.

Additionally, Agriculture and Public sector will be able offer another significant revenue source, especially since domestic market seems to lack competitive alternatives in testing services for pesticide residue and organic contaminants, in terms of required accreditations (accreditation scope to fully cover GLOBALG.A.P. requirements) and certifications (QS, BNN certifications, usually demanded by retailers and exporters in their selection of agricultural goods suppliers). Throughout anticipated competition, only four competitors offer such services either in a not-accredited or in a limited-accredited status. AGROLAB RDS's experience, know-how and efforts will strategically target on this market gap to become "nr.1 player" in the Romania market.



## 5.2 Branding

Quality excellence and reliability will be key elements of creating a unique impression in the customer's mind. This cooperate identity will be promoted through company's existing logos (Figure 5.1) which shall be introduces in the Romania market offered for key account clients

*Figure 5.1 Agrolab RDS' logos*



### **5.3 Relationship Marketing**

Relationship marketing activities will provide an effective network of long-term relationships in order to earn and retain the business model (Kotler and Keller, 2000). These activities will include:

- Customer relationship management through company's Sales department, offering direct-to-the-customer approach.
- Participation in exhibitions and trade fairs in Romania<sup>67</sup> (e.g. "GastroPan Exhibition", "Indagra Food Int'l exhibition", "Indagra Int'l fair for agriculture", "Expo Drink&Wine").
- Newsletter Marketing concerning offered added value services, company news or new legislation issues (e.g. upcoming changes in legislation).

### **5.4 Customer Service & Support**

Start-Up company should be able to offer a continuous and solid customer service support as a differentiative advantage to strengthen its competitive standing. This shall include:

- Dedicated Sales department for customer's technical and commercial support,
- Dedicated customer service department and a call center service,
- Digitalization through LIMS access for the customers for real-time exchange of information.
- Continuous request for performance effective feedback through customer satisfaction surveys (yearly basis).

## **6. The Business Model**

Proposed business model is the establishment of an independent laboratory facility in the area of Bucharest, fully autonomous in terms of business operation and business administration

Domestic company will be able to offer all current developed services of AGROLAB RDS, either locally (internally) developed/executed or subcontracted to other laboratories, as presented in table 6.1.

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<sup>67</sup> <https://tofairs.com/fairs.php?fld=20&rg=1&cnt=1008&cty=&sct=>

## 6.1 Acquisition vs Start Up

Growth expansion strategies in global TICS market usually include a mixture of Merge & Acquisition (M&A) and Start-up activities (e.g. Eurofins, SGS , BureauVeritas).

Although a M&A activity can be supported by AGROLAB RDS (or the TENTAMUS group) and would surely create considerable advantages in company's value and portfolio increase (mostly based on the "owned" market share of the selected candidate), proposed business plan promotes a Start-up activity as more suitable for the current economic, business and competition environment in Romania (Figure 6.1). Romania market shows limited M&A alternatives with the majority of existing competition to be either:

- Subsidiaries of multinational TICS "big players" (*WESSLING Romania SRL, J. S. HAMILTON ROMANIA SRL, EUROFINS FOOD TESTING SRL, SGS ROMÂNIA SA, CONTROL UNION ROMANIA SRL, COTECNA / TIMEX SURVEYORS SRL, ALS LIFE SCIENCES ROMANIA SRL*), and therefore not a realistic candidate for M&A activity.
- small sized companies (*ALMARO MED SRL, BACTOLACT SRL, MANOR LABORATORY CENTER SRL, I.M.U. LABORATORIES SRL*) or medium sized companies (*INDUSTRY LAB SRL, ECO LAB CONSULT SRL*), all of them offering a limited variety of accredited laboratory testing services which possible reflect to respectively limited laboratory infrastructures or technical capabilities . These companies will probably require, additional to any M&A cost, investments for updating their infrastructure, developing and accrediting more sophisticated methods, in order to successfully expand their client portfolio.
- Local "big players" (*CARTARE AGROCHIMICA SRL, ICA R&D SRL, GIVAROLI IMPEX SRL*), could be an attractive M&A target (in terms of market share and provided services) but with further investigation to be needed.

The need for rapid and efficient market penetration remains a critical decision factor. Investigation among realistic candidates could be a time-consuming with unknown results in terms of M&A's final cost (compared to the relevant Start-up cost), management scheme evaluation, "real" candidate's financial status and market share, portfolio's significance and organization culture similarity.

On the other hand, AGROLAB RDS already owns a significant market share in the country and has the required know how and resources, making a potential Start-Up activity seem more rapid and therefore more appealing as a country penetration strategy.

Figure 6.1 M&A vs Start-Up procedure for Agrolab RDS

	<b>M&amp;A</b>	<b>Start-Up</b>
<b>Pros</b>	<ul style="list-style-type: none"> <li>✓ M&amp;A experience.</li> <li>✓ Acquire client portfolio.</li> <li>✓ Adding value (1+1=3).</li> </ul>	<ul style="list-style-type: none"> <li>✓ Existing business know-how.</li> <li>✓ Existing market share.</li> <li>✓ Can be performed in time</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>✗ Limited candidates.</li> <li>✗ Could be a time-consuming process.</li> <li>✗ Integration &amp; corporate culture issues.</li> <li>✗ If existing management is not string, initial internal people dislocation will be needed (IHRM constrains)</li> </ul>	<ul style="list-style-type: none"> <li>✗ IHRM constrains.</li> <li>✗ Corporate culture issues</li> <li>✗ Accreditation, permits, licenses risks</li> </ul>

## 6.2 Big vs Small Company size

Focus of this business plan is to evaluate a self-organized and managed start-up laboratory facility, rapidly developed and able to operate as independently as possible and to further grow in the future to become a separate growth pillar for the AGROLAB RDS organization. For this reason no alternatives for a smaller size initial investment, gradually to be enhanced according to market's reaction, is evaluated.

## 6.3 Offered services

The project will surely aim to support business operations from day-one. Inevitably, due to required technical development time, all services shall be initially offered through external collaborators and gradually, as development occurs, internally produced services shall be introduced to the market. The final portion and type of locally produced services (table 6.1) are strategically aiming to cover main domestic market's needs to the highest possible degree as well as ensuring quick service-response times and offering desired revenues.

**Internally developed services:** In order to achieve profitability and ability for further development, company should aim for the highest internally produced volume of services. Marked in figure 6.2, these services would be either

- High-demanded by the market and therefore high turnover contributed,
- Quick response demanded and therefore needed to be internally executed,
- Cost effective (e.g. if they require same equipment as other internally executed services).

**Subcontracted services:** all other demanded by the market services shall be subcontracted to AGROLAB RDS-Greece or other collaborated laboratories based on

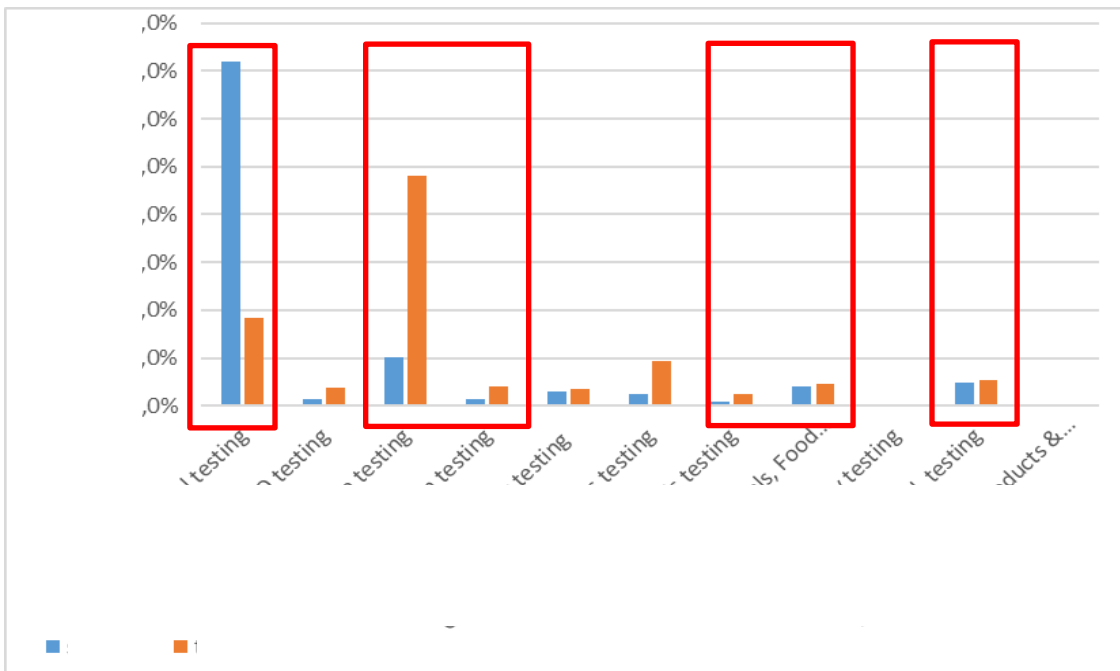
- collaborator's capability to perform the testing service,
- client's technical requirements (e.g. Accreditation, applied method, TAT etc)
- the cost of the testing service

These services are not proposed to be routine demanded since they bare an additional subcontracting cost for the company (see section 6.7) as well as an extended TAT by 1-3 days, due to required dispatch-via-courier procedure.

**Table 6.1 Offered services**

<b>Internally to be developed and supported services:</b>	
➤ <i>Microbiological testing</i>	➤ <i>Nutritional analysis testing</i>
➤ <i>Pesticide residue testing</i>	➤ <i>Heavy metals testing</i>
➤ <i>Mycotoxin testing</i>	➤ <i>Soil testing (nutrient elements)</i>
<b>Services to be offered and supported through collaboration with other laboratories:</b>	
➤ <i>GMO testing</i>	➤ <i>Inorganic contaminants testing</i>
➤ <i>Fat &amp; Oils testing</i>	➤ <i>Soil contaminants testing</i>
➤ <i>Allergen testing</i>	➤ <i>Authenticity elements testing</i>
➤ <i>Plasticizer Migration testing</i>	➤ <i>Food Preservatives testing</i>
➤ <i>Dioxins, PAHs, MCPD, MOSH</i>	➤ <i>Plant Protection products testing</i>
➤ <i>Acrylamide testing</i>	

**Figure 6.2 Targeted services to be developed in terms of nr. of samples & revenue contribution of provided services of Agrolab RDS**



**6.4 Organization Chart**

A Functional, Top-Down Hierarchy Organization Chart shall be implemented (Figure 6.3) with a General Manager directing three sub-divisions: Sales (including sales, consulting and sampling operations) , Administration and Customer service (including sample registration, certificate issuing, call center and invoice issuing operations) and Technical division (including all laboratory testing operations). Although proposed organization chart seems strict, an open minded and flexible hierarchy system may also be needed to be adapted to any uprising circumstances, as business develops.

IT, Quality Assurance, R&D and IHRM services will be distance-provided by AGROLAB RDS-Greece in the form of an external collaborator contract Domestic recruiting HR services as well as Accounting and Law services will be provided by locally based external collaborators.

**6.5 Personnel Planning and Management**

Personnel forecast on each described division, during the five years of operation, is set out in the following table (Table 6.2). Day-one will include all required personnel for General Management and Sales division while required personnel for Administration and Technical divisions will increase proportional, according to the expected timetable of laboratory testing methods establishment and business development.

### Local personnel

Local personnel will be the majority of the work force and will be selected based on certain minimum criteria, described in table 6.3, where English language will be a must-have, both in written and oral communication, to ensure adequate cross-communication with other AGROLAB RDS's and TENTAMUS-group's companies.

### Expatriate personnel

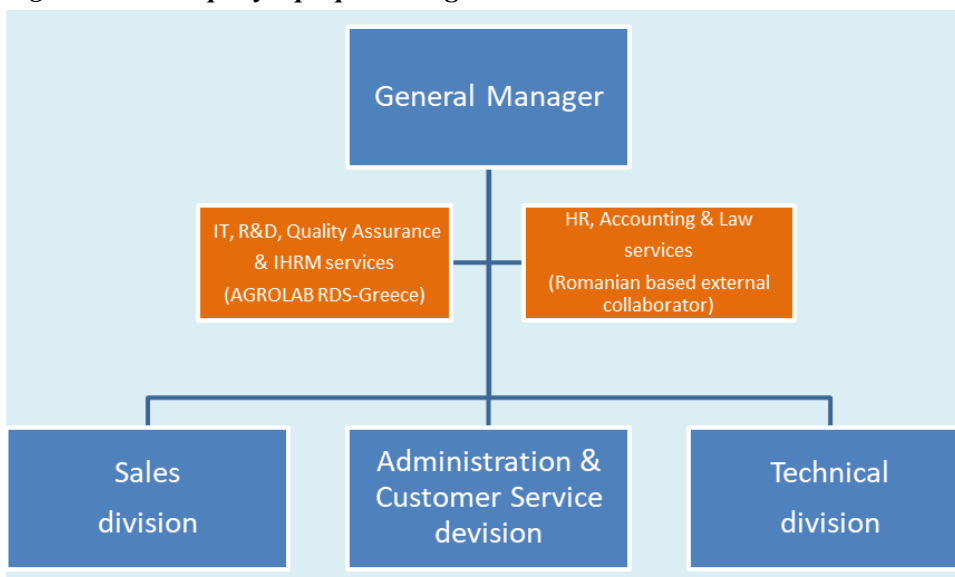
Special attention should be paid to required expatriate personnel (Aycan and Kanungo ,1997) that will be required to assist business establishment and development.

Proposed business plan promotes a Long-duration expatriate general Manager (4-5 years period) able to communicate company's vision and Mission Statement as well as to ensure a full representation of the "parent company" in the new subsidiary.

Additional Short-duration expatriation activity (varying from 10 days up to 1 month period) will be required by AGROLAB RDS-Greece's Technical Director, Quality Assurance Manager and other organization's Technical Managers, to guide, overview and ensure the successful implementation and validation of the to-be-developed testing methods, within given deadlines. If required so, additional capable people/expertise may be needed to be hired to support business development.

A detailed expense forecast for all personnel planning is presented in table 6.2 and in Appendix III.

**Figure 6.3 Company's proposed Organization Chart**



**Table 6.2 Personnel planning by division**

Divisions	Year 1	Year 2	Year 3	Year 4	Year 5
<b>• General Management</b>					
General Manager	1*	1*	1*	1*	1*
<b>• Sales division</b>					
Salesman	1	1	1	1	1
Sampling operations	1	1	1	2	2
<b>• Administration division</b>					
Sample registration/ Certificate issuing/ call center/ invoice issuing	1+1**	2	3	4	4
<b>• Technical division</b>					
Laboratory expert	3 + 1*	3 + 1*	3	3	3
Laboratory Analyst	4	4	4	5	6
Laboratory Assistant	1*	4	5	8	8
<b>TOTAL PERSONNEL</b>	<b>14</b>	<b>17</b>	<b>18</b>	<b>24</b>	<b>25</b>

\*Expatriate personnel, \*\*6month basis

**Table 6.3 Personnel selection criteria by division**

Divisions	Education criteria	Previous working experience criteria	Other requirements
<b>• General Management</b>			
General Manager	Bachelor & Master's degree	Adequate previous management experience in TICS market	English language Computer skills Technical or Financial skills
<b>• Sales division</b>			
Salesman	Bachelor degree (Agronomist or Food Science)	previous working experience in Food/ Agriculture sector (preferably on Sales)	English language Computer skills
Sampling operations	Bachelor degree (Agronomist or Food Science)	none	English language Computer skills Driving license
<b>• Administration division</b>			
Sample registration/ Certificate issuing/ call center/ invoice issuing	Basic /preferable college degree (Agronomist or Food Science)	previous working secretarial experience	English language Computer skills
<b>• Technical division</b>			
Laboratory expert	Bachelor degree (Chemist, Biology or Food Science)	previous working experience in laboratory control analysis	English language Computer skills
Laboratory Analyst	Bachelor degree (Chemist, Biology or Food Science)	none / preferable working experience in testing laboratory	English language Computer skills
Laboratory Assistant	Bachelor degree (Chemist, Biology or Food Science)	none / preferable working experience in testing laboratory	English language Computer skills

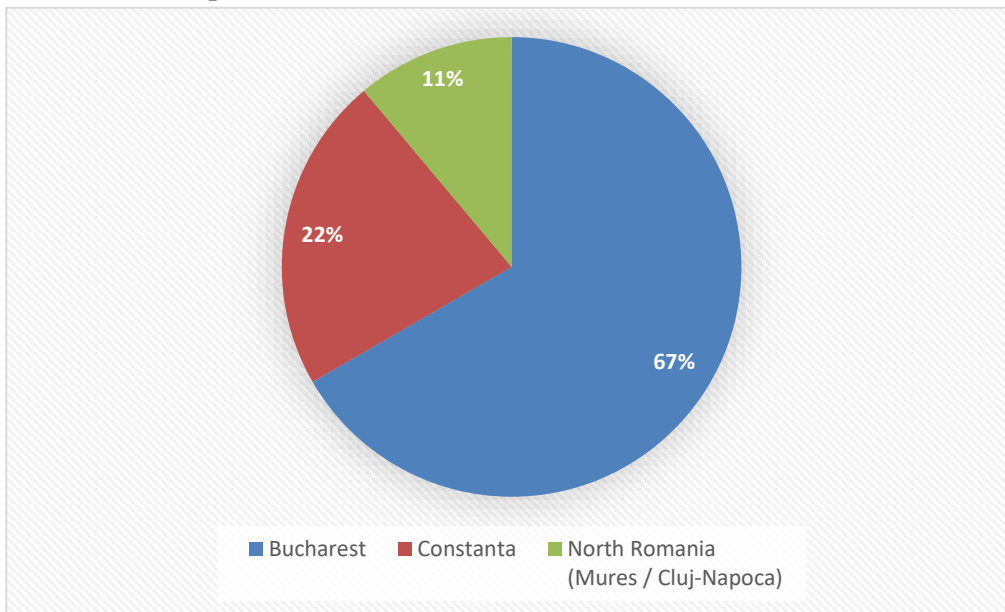
\*Expatriate personnel



## 6.6 Facility selection

Based on above proposed strategy, a suitable Industrial-type building should be searched out, in the area of Bucharest as 67% of anticipated competition is located there (Figure 6.4). Building should be suitable to house all business operations and to be able to support all required modernization activities (according GLP, ISO 17025 standards etc.) as well as all, required by Romanian legislation, operation licenses and approvals. To be able to facilitate all required business operations and possible future developments, candidate building should be not less than 1.000 m<sup>2</sup> with an optimum of 1.200 – 1.500 m<sup>2</sup>.

*Figure 6.4 Competition's location*



## 6.7 Pricing & Commercial policy

Romania's currency is Romanian leu (RON) with current EURO/RON exchange rate of 4.7728<sup>68</sup>. Up to now organizations' policy in Romania involved a pricing and invoicing policy in Euro and no VAT rate charges. Establishment of a Romanian based subsidiary will require all invoices to be issued locally, in RON currency, charged with 19% VAT<sup>69</sup>.

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<sup>68</sup> <https://finance.yahoo.com/quote/eurron=x/>

<sup>69</sup> Deloitte: International Tax Romania Highlights 2019

<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-romaniahighlights-2019.pdf>

Current commercial policy includes a basic specific selling price for each testing service, common for all companies within AGROLAB RDS' group. Each company may

- Apply up to a maximum discount of ■% towards its customers
- Receive a fix discount of ■% for serviced internally subcontracted to other groups' companies

Based experience on current collaboration with the Romania market has shown that organization Pricing and commercial policy can also be applied, with possible minor changes to be implemented, to meet local markets requirements and attitude (e.g. matching the market rate).

Table 6.4 shows current AGROLAB RDS' average selling prices (after commercially provided discounts) towards its customers, that will also be also applied for the new subsidiary.

In order to support the business model, special care and focus should be paid to the applied credit policy, ensuring the all revenues will be collected in time. Credit should ideally be at an average of 30 (preferably) to 45 days and by no means to exceed 60 days from invoice issuing.

**Table 6.4 Average offered prices per sample per testing service**

Type of laboratory testing service	average price per sample
Microbiological testing	■ €
Pesticide Residue testing	■ €
Mycotoxin testing	■ €
Nutritional analysis testing	■ €
Heavy metals, Food preservatives	■ €
Soil testing	■ €
GMO testing	■ €
Sensory testing	■ €
Plant Protection Products & Fertilizers testing	■ €
Fats & Oils testing	■ €
Organic & Inorganic Contaminants testing	■ €

## 6.8 Business development

Business development will be supported by dedicated a commercial and an administration department able to provide technical and customer service support to existing and new clients. Customer service will also be supported by sampling and sample-pick-up services, provided either by company's dedicated and trained-for-the-task personnel or courier subcontractors. This will enhance company's ability to maintain quick response time in receiving samples, not only in the area of Bucharest but also from the rest of the country

## 7. The Schedule

A key and crucial element of success of proposed business plan will be to achieve for the new Start-up a rapid business establishment and development. Below are presented the key-phases that are essential in the success of this business plan while detailed milestones are presented in Appendix II

### 7.1 Phase 1: Initial Development/pre-launch period

#### Estimated duration: 1 year before business launch

Initial phase shall be executed by AGROLAB RDS-Greece, based on existing experience in the business model and shall include the following activities

- **Site assessment:** Selected site should be suitable for the installation and operation of all required business and laboratory activities, accommodate required IT infrastructure and have regulatory compliance for the intended use. Concerning all required modernization activities, a suitable, or more, contactors should be also selected, and a realistic timetable for each modernization activity should be established.
- **Legal Establishment Requirements and Permits Acquisition.** All required legal actions and decisions concerning legal establishment and operation of the company (type of company, company registration, other relevant permits and licenses) should be well investigated and local collaborators and decision makers should be selected to ensure that all legal establishment and permit procedure will not delay business launch
- **Selection of equipment** of all required equipment (analytical/laboratory, IT infrastructure, laboratory and office furniture etc). AGROLAB RDS's existing experience will be vital for rapidly selecting appropriate contractors and equipment. On the other hand, negotiation delays (concerning acquisition and installation costs, maintenance & guarantee policies, financing alternatives etc.) or even possible extended could be a delay factor for the whole project.
- **Personnel assessment:** Hiring suitable local personnel could be a time-consuming procedure especially when it involves specific selection requirements (section 6.5). With the additional issue of extremely low current unemployment rate in Romania of 3,8%<sup>70</sup>, company should intensively focus on HR activities to seek and evaluate potential candidates.

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<sup>70</sup> Romanian National Institute of statistics

[http://www.insse.ro/cms/sites/default/files/com\\_presa/com\\_pdf/somaj\\_tr2e\\_19.pdf](http://www.insse.ro/cms/sites/default/files/com_presa/com_pdf/somaj_tr2e_19.pdf)

- Required **expatriate procedures** should also be in advanced organized. An appropriate selection program should be implemented with specific performance dimensions that is referring to the aimed foreign environment (Black, Gregersen, & Mendenhall, 1992). Candidates evaluation and selection for General Manager's position should take place between 6 months to 1 year before project launch and will require intense IHRM engagement to ensure project's success.
- **Market research and pre-launch marketing and commercial activity.** During this pre-launch period AGROLAB RDS should focus its commercial and marketing efforts and activities to strengthen its positioning and market share in Romania. Extent communication (including increased traveling activity in the country) with existing and potential clients and collaborators should be made to establish an effective marketing and commercial strategy for the upcoming Start-Up project. Ideally, AGROLAB RDS' must attempt to increase its domestic client portfolio with new customers, before any launch period.

## 7.2 Phase 2: Incubation period

### Estimated duration: first 6 months of Year 1

In this phase all requirements for business launch (personnel, building modernization, infrastructure and testing equipment installation) should be completed rapid end effective enough to create a good impact to the domestic market, provided that all phase-1 prerequisites are successfully been accomplished. Start-up company will start to commercially operate, while its technical divisions will start be preparing for their development phase.

- **Infrastructure installation and building modernization**, should be completed within the first 3 months
- **Commercial and administration divisions shall focus on full operation** from day one. All required personnel for these divisions will be hired form day one and company will start operating commercially. Since no technical division will at that moment operate, all services will be provided through subcontracting dispatches to AGROLAB RDS-Greece.
- **Technical department's** required, personnel will be hired within three months after phase 2 begins and after the successful installation of all required laboratory infrastructure. Their mission will be to start operating installed testing equipment and validating their procedures and methodologies start preparing for an upcoming ISO 1702 audit (phase 3)  
In their support, a continuous **expatriate activity** form AGROLAB RDS' technical managers will begin, to provide insights, solutions and prepare the upcoming audit.

### **7.3 Phase 3: business launch and technical development**

#### **Estimated duration: 6 months**

During this period the technical divisions, although not yet accredited, will be able to undertake commercial requests. Additions in laboratory personnel will happen to strengthen the production capacity of the technical divisions, while preparing them self for the ISO 17025 audit. Ideally ISO 17025 audit should take place at the end of this phase and within a year after the start of the incubating period.

### **7.4 Phase 4: Operational period**

#### **Estimated duration: 4 years**

After a year from the initial incubation period and provided a successful ISO 17025 certification, company will have reached its operational and business development period. Subcontracting costs are to be minimized only to not internally produced services only and company will become competitive int the Romania market. Key elements of this phase will be

- Internal growth of the company (on terms of personnel and technical ability).
- Commercial growth (sales) in terms of acquiring market share.

### **7.5 High risk stages**

All details in the required actions, goals and deadlines to be followed are presented in Appendix II. Special focus should be given to phase 2 (Incubation period) and phase 3 (business launch and technical development) since efficient technical operation and ISO 17025 accreditation is the key factor that will allow business operation to evolve. Implementation delays or failure in acquiring ISO 17025 accreditation will damage company's reputation, maintain high subcontracting costs and risk the project's success.

## **8. Project's Expenses and Funding**

### **8.1 Project's anticipated expenses**

Project's anticipated expenses (Costs) will be distinguished between Start-Up/investment cost, to occur during the first year of operation establishment, and Operating Costs, including the cost of goods sold, operating expenses as well as all overhead expenses for the examined 5-year operation cycle

### **Start-Up/Investment costs**

- Company's legal establishment cost.
- Rents in advance for selected building.
- Real estate commissions.
- Cost of building's modernization and improvement.
- IT systems requirements.
- Miscellaneous operational equipment.
- Acquisition and Installation for Analytical testing equipment, Information Management System & miscellaneous equipment.

### **Operating Costs**

- Cost of premises (including rent & building's insurance etc) & utilities costs (e.g. heating, water, sewer, electricity, telephone/internet).
- Miscellaneous supporting services (accounting and law services).
- Car leasing and Fuel costs.
- Marketing costs (Advertising and Promotion).
- Travel expenses (expatriate personnel, marketing activities etc).
- Accreditation activities costs.
- Courier expenses.
- Staff costs: employee wages, expatriate's wages, other benefits etc.
- Testing Services Laboratory Operating Costs (maintenance, consumables etc).
- Laboratory Information Management System (LIMS), SAP & IT miscellaneous maintenance cost.

Tables 8.1 and 8.2 present all required Start-Up/Investment and operating costs, while more detailed information is presented in Appendix III

## **8.2 Fixed and Variable costs**

Occurred costs are divided into Fixed Costs, which are not affected by the operation's volume variances, and Variable Costs, which increase or decrease depending on a company's operation volume.

For reasons of simplicity, due to the great number of variables to consider when determining the variable cost for any given level of laboratory testing activity, and since current business plan aims in specific sales/development forecast scenarios, mentioned variable costs are set in a way to provide a reliable and realistic framework for the corresponding operation volume.

It is considered necessary, for all mentioned costs, to be periodically revisited, at least annually, during project execution and be adjusted accordingly, to project the overall impact of possible operational changes on project's budget.

*Table 8.1 Start-Up costs*

<b>START UP COSTS</b>		
	<b>Net prices €</b>	<i>Net prices RON*</i>
Company's legal Establishment Cost	<b>1.500 €</b>	7.159 RON
Rents in advance for selected building	<b>20.000 €</b>	95.456 RON
Real estate commissions	<b>2.000 €</b>	9.546 RON

<b>Building's Modernization &amp; Improvement</b>		
Various operations	<b>15.000 €</b>	71.592 RON
Air conditioning	<b>20.000 €</b>	95.456 RON
Laboratory flooring operations	<b>10.000 €</b>	47.728 RON
Office furniture	<b>10.000 €</b>	47.728 RON

<b>IT Systems Requirements</b>		
LIMS (no nr. of licenses limit)	<b>15.000 €</b>	71.592 RON
SAP (2 licenses)	<b>7.000 €</b>	33.410 RON
Server (1 item)	<b>7.000 €</b>	33.410 RON
Firewall	<b>1.000 €</b>	4.773 RON

<b>Miscellaneous operational equipment</b>		
computers (8 items)	<b>5.760 €</b>	27.491 RON
laptop (4 items)	<b>3.280 €</b>	15.655 RON
printers (4 items)	<b>2.500 €</b>	11.932 RON

<b>Microbiology testing laboratory</b>		
Laboratory Furniture	<b>5.000 €</b>	23.864 RON
Vortex (3 items)	<b>750 €</b>	3.580 RON
Laminar air flow cabinet	<b>10.000 €</b>	47.728 RON
Autoclave	<b>5.000 €</b>	23.864 RON
Filtration device	<b>3.000 €</b>	14.318 RON
Incubator (7items)	<b>35.000 €</b>	167.048 RON
Digital Precision balance (3 items)	<b>1.800 €</b>	8.591 RON
Freezer (2 items)	<b>1.000 €</b>	4.773 RON
Stomacher blender	<b>800 €</b>	3.818 RON
Magnetic stirrer (3 items)	<b>1.200 €</b>	5.727 RON
Colony counter	<b>600 €</b>	2.864 RON

Microscope	<b>800 €</b>	3.818 RON
pH meter	<b>400 €</b>	1.909 RON
Water bath (3 items)	<b>1.800 €</b>	8.591 RON
Refrigerator (3 items)	<b>1.500 €</b>	7.159 RON

<b>Contaminant testing laboratory: Pesticide Residue testing &amp; Mycotoxin testing</b>		
Laboratory Furniture	<b>5.000 €</b>	23.864 RON
LC-QTOF	<b>300.000 €</b>	1.431.840 RON
GC-MS/MS	<b>110.000 €</b>	525.008 RON
GC-FPD	<b>25.000 €</b>	119.320 RON
LC-MS/MS	<b>200.000 €</b>	954.560 RON
Centrifugal	<b>5.000 €</b>	23.864 RON
Condenser	<b>5.000 €</b>	23.864 RON
Fume hood	<b>5.000 €</b>	23.864 RON
Digital Precision balance (2 items)	<b>2.000 €</b>	9.546 RON
Freezer (2 items)	<b>1.000 €</b>	4.773 RON
miscellaneous equipment	<b>5.000 €</b>	23.864 RON
Refrigerator (3 items)	<b>1.500 €</b>	7.159 RON
analytical standards	<b>70.000 €</b>	334.096 RON

<b>Nutritional analysis testing &amp; Heavy metals, Food preservatives testing laboratory</b>		
Laboratory Furniture	<b>5.000 €</b>	23.864 RON
ICP-MS	<b>110.000 €</b>	525.008 RON
Analytical scale (3 items)	<b>3.000 €</b>	14.318 RON
Knife Mill (x2)	<b>4.000 €</b>	19.091 RON
Muffle furnace	<b>5.000 €</b>	23.864 RON
Fume hood	<b>5.000 €</b>	23.864 RON
Drying Oven for moisture measurement	<b>2.000 €</b>	9.546 RON
Block Digestion Unit for Kjeldahl analysis	<b>6.000 €</b>	28.637 RON
Steam Distillation Unit	<b>10.000 €</b>	47.728 RON
Soxhlet - Fat Extraction Unit	<b>6.000 €</b>	28.637 RON
Fiber Determination Unit	<b>10.000 €</b>	47.728 RON
Microwave Digestion System	<b>10.000 €</b>	47.728 RON
Rotary Evaporator	<b>2.000 €</b>	9.546 RON
Double Beam Spectrophotometer	<b>8.000 €</b>	38.182 RON
miscellaneous equipment : pH meters, stirrers, shakers, milliQ, vortex, volumetric, pipettes e.t.c.	<b>5.000 €</b>	23.864 RON
various Labware	<b>10.000 €</b>	47.728 RON

<b>Soil testing laboratory</b>		
Laboratory Furniture	<b>2.000 €</b>	9.546 RON
Drying Oven (x2)	<b>5.000 €</b>	23.864 RON
Greeding unit	<b>10.000 €</b>	47.728 RON



Analytical scale (4 items)	<b>2.000 €</b>	9.546 RON
Bernard calcimeter	<b>1.500 €</b>	7.159 RON
Ph meter, EC meter	<b>1.000 €</b>	4.773 RON

<b>TOTAL START-UP INVESTMENT</b>	<b>1.145.590 €</b>	5.467.672 RON
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\*EURO/RON exchange rate = 4,7728

**Table 8.2 Yearly Operating Costs**

<b>YEARLY OPERATING COSTS</b>		
	<b>Net prices € per Year</b>	<i>Net prices RON * per Year</i>
Facility rent	<b>120.000 €</b>	572.736 RON
Utilities	<b>24.000 €</b>	114.547 RON
Accounting services	<b>4.000 €</b>	19.091 RON
Law services	<b>4.000 €</b>	19.091 RON

<b>Car leasing &amp; Fuel expenses</b>		
Company car for General Manager	<b>4.920 €</b>	23.482 RON
Company car for Sales Area Manager	<b>4.320 €</b>	20.618 RON
Company car for Field Sampling services	<b>3.600 €</b>	17.182 RON
Fuel cost for General Manager	<b>2.880 €</b>	13.746 RON
Fuel cost for Sales Area Manager	<b>2.880 €</b>	13.746 RON
Fuel cost for Field Sampling services	<b>2.880 €</b>	13.746 RON

<b>Expatriate Expenses</b>		
Expatriate package for General Manager	<b>4.800 €</b>	22.909 RON
air-tickets	<b>2.400 €</b>	11.455 RON
Expatriate package for Expatriate laboratory expert	<b>variable cost</b>	
air-tickets	<b>variable cost</b>	

<b>Marketing expenses</b>		
Marketing expenses	<b>3.000 €</b>	14.318 RON

<b>Accreditation and laboratory efficiency expenses</b>		
ISO 17025 Audit	<b>3.000 €</b>	14.318 RON

<b>Courier expenses</b>		
Courier expenses (other than subcontracting dispatched)	<b>variable cost</b>	
Courier expenses for subcontracted testing	<b>variable cost</b>	

IT Systems maintenance		
SAP licenses support (2 licenses)	1.500 €	7.159 RON
other IT expenses	1.500 €	7.159 RON

Salaries expenses (LABOR COST)		
<b>• General Management</b>		
General Manager	42.000 €	200.458 RON
<b>• Sales division</b>		
Sales Area Manager	15.960 €	76.174 RON
Field sampling operations	6.888 €	32.875 RON
<b>• Administration division</b>		
Administration employee	6.888 €	32.875 RON
<b>• Technical division</b>		
Microbiology laboratory expert	10.850 €	51.785 RON
Micr.lab. Analyst	7.294 €	34.813 RON
Micr.lab. Assistant	6.888 €	32.875 RON
Contaminant laboratory expert	10.850 €	51.785 RON
Cont. lab. Analyst	8.857 €	42.273 RON
Cont. lab. Assistant	6.888 €	32.875 RON
Nutritional laboratory expert	10.850 €	51.785 RON
Nutr.lab. Analyst	7.294 €	34.813 RON
Expatriate laboratory expert (AGROLAB RDS)*	variable cost	

Subcontracting testing costs	
Subcontracted testing costs	variable cost

Testing Services Laboratory Operating Costs	
<b>Microbiology testing laboratory</b>	
equipment maintenance	variable cost
testing consumables for Microbiological lab	variable cost
<b>Contaminant testing laboratory: Pesticide Residue testing &amp; Mycotoxin testing</b>	
LC-QTOF maintenance	variable cost
GC-MS/MS maintenance	variable cost
GC-FPD maintenance	variable cost
LC-MS/MS maintenance	variable cost
testing consumables for Contaminant lab	variable cost
<b>Nutritional analysis testing &amp; Heavy metals, Food preservatives, Inorganic contaminants testing laboratory</b>	
ICP-MS maintenance	variable cost
testing consumables for NUTRITIONAL & SOIL lab	variable cost

\*EURO/RON exchange rate = 4,7728

## 8.3 Funding

### Initial investment funding

Initial minimum required investment for the establishment of new subsidiary is estimated at 1.145.590 € (5.467.672 RON), suggested to come directly from the shareholders in a form of share capital contribution. Alternative combined ways of external funding can also be examined like debt capital (e.g. bank loan, or corporate loan), equity capital or European Start-up Funding Programs, in a suitable mix between debt and equity that would be most cost-effective as well as balanced in terms of engaged investing parties' risk-taking shares .

### Operation's funding

Business operations may require additional funding activities, mostly in terms of cash flow requirements, especially during the first 1-2 years, where the new start-up company will still be in development. Convention of short-term debt into long-term debt can ensure stable repayment forecast.

## 9. Sales and Operation Forecast

Sales and operation forecast (with anticipated fixed and variable expenses) are presented in Appendix IV. Taking concern that AGROLAB RDS has the advantage of business experience and know-how, required finance and structural resources and an existing significant portfolio in the Romania market, new Start-up will aim to extensively increase current market share in the country and become one of the five top players in the domestic market within the first five years of operation.

Based on current achieved turnover for 2019 (■ K Euros) and the size of the proposed investment, minimum achieved turnover for the 5-year Start-up period is set at 1,2 M Euros (10% of estimated market size)

Three (3) alternative sales forecast scenarios are presented and described in detail in Appendix IV, based on the success of market penetration (table 9.1).

**Scenario 1 – Optimistic scenario** (Appendix IV), projects:

- an aggressive business penetration with ~■% increase of current business volume
- 18% annual growth rate
- Achieved turnover end of the 5-year period of 1,418 M Euros (11,4% estimated market share)

**Scenario 2 – Base scenario** (Appendix IV) projects:

- Initial █% increase of current business volume
- 12% annual growth rate
- Achieved turnover end of the 5-year period of 1,063 M Euros (8,6% estimated market share)

**Scenario 3 – Pessimistic Scenario** (Appendix IV) projects:

- Initial █% increase of current business volume
- 10% annual growth rate
- Achieved turnover end of the 5-year period of 0,961 M Euros (7,8% estimated market share)

*Table 9.1 Sales forecast scenarios*

	year 1	year 2	year 3	year 4	year 5
Scenario 1 - Optimistic	731.751 €	863.466 €	1.018.890 €	1.202.290 €	1.418.702 €
Scenario 2 – Base	675.912 €	757.021 €	847.864 €	949.608 €	1.063.561 €
Scenario 3 – Pessimistic	628.026 €	722.230 €	794.453 €	873.899 €	961.289 €

More optimistic sales forecasts, although are within projects’ potentials and resources, are not examined due to possible constraints in business development. These constrains could either be internal (e.g. IHRM difficulties in cross culture communication or possible failure in technical development) or external (legislative and business environment issues concerning required operate licenses and permits) Especially due to the high risk of Start-Up company not to be able to reach the vital ISO 17025 accreditation’s deadline (scheduled Phases 2 & 3) within the first year of operation, each of the above scenarios is also simulated on the basis of achieving ISO 17025 accreditation during the end of the 2<sup>nd</sup> year of operations.

## **10. Revenues and profitability data**

According to each scenario’s sales forecast, revenue and profitability data results are presented below

## 10.1 Scenario 1 – Optimistic

Table 10.1 Optimistic scenario Sales forecast

	year 1	year 2	year 3	year 4	year 5
Scenario 1 - Optimistic	731.751 €	863.466 €	1.018.890 €	1.202.290 €	1.418.702 €

### 10.1.1 Optimistic scenario, Risk-free

- ISO 17025 accreditation at the end of 1<sup>st</sup> year of operations
- During 1<sup>st</sup> year of operation, only 30% capacity is achieved for the internally developed testing methods.

Figure 10.1 Optimistic Scenario -Risk free results



### 10.1.2 Optimistic scenario, delay Risk for ISO 17025 accreditation

- ISO 17025 accreditation at the end of 2nd year of operations
- During first 2 years of operation, only 30% capacity is achieved for the internally developed testing methods.

Figure 10.2 Optimistic Scenario -Accreditation Delay Risk results



## 10.2 Scenario 2 – Base

**Table 10.2** Base scenario Sales forecast

	year 1	year 2	year 3	year 4	year 5
Scenario 2 – Base	675.912 €	757.021 €	847.864 €	949.608 €	1.063.561 €

### 10.2.1 Base scenario, Risk-free

- ISO 17025 accreditation at the end 1<sup>st</sup> year of operations
- During 1<sup>st</sup> year of operation, only 30% capacity is achieved for the internally developed testing methods.

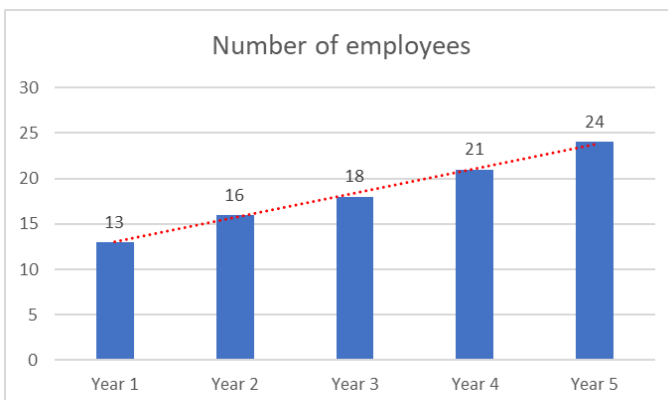
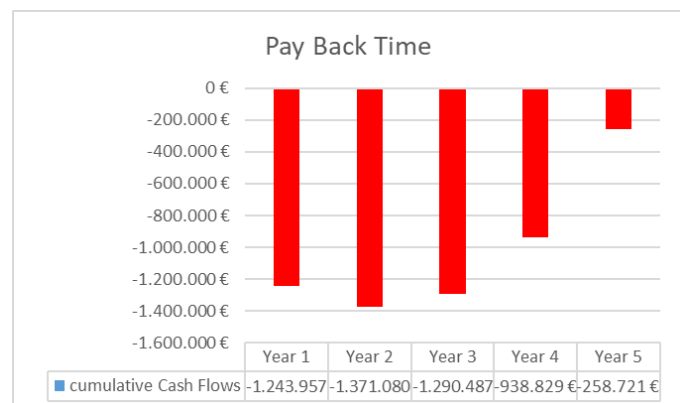
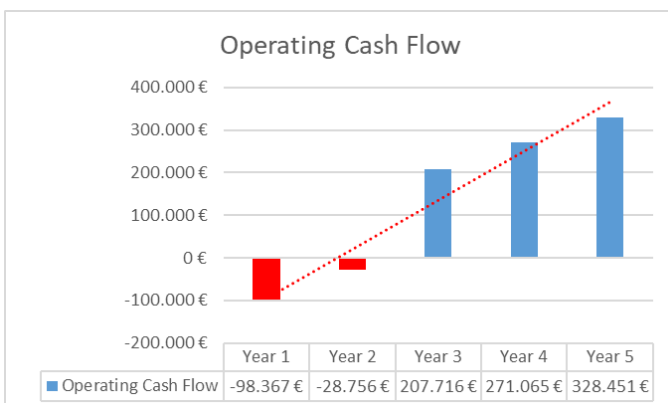
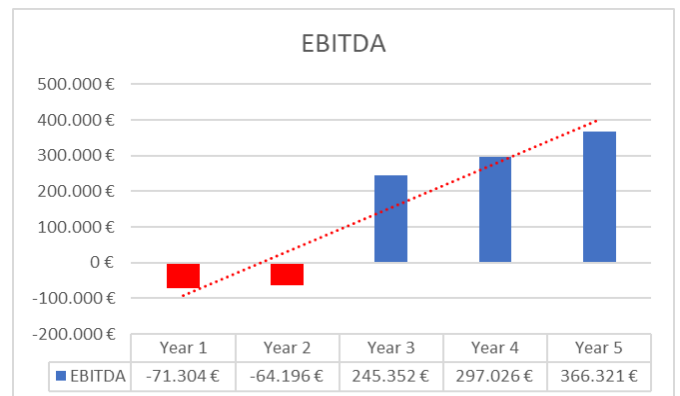
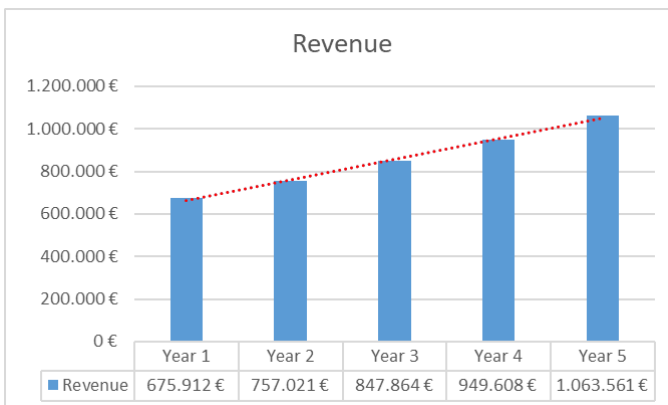
**Figure 10.3** Base Scenario -Risk free results



### 10.2.2 Base scenario, delay Risk for ISO 17025 accreditation

- ISO 17025 accreditation at the end of 2<sup>nd</sup> year of operations
- During first 2 years of operation, only 30% capacity is achieved for the internally developed testing methods.

Figure 10.4 Base Scenario -Accreditation Delay Risk results





## 10.3 Scenario 3 – Pessimistic

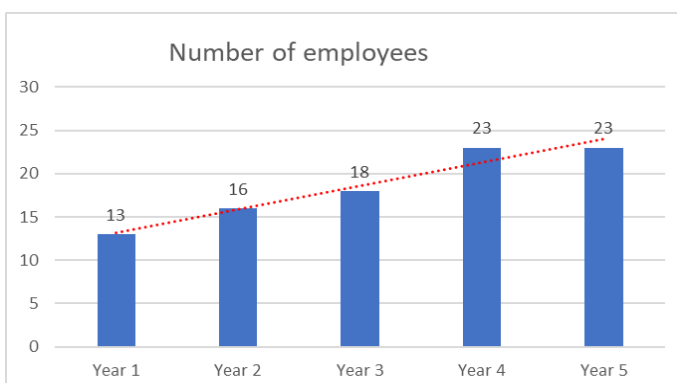
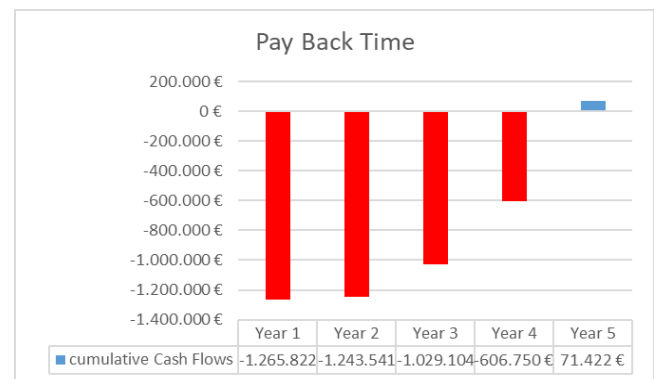
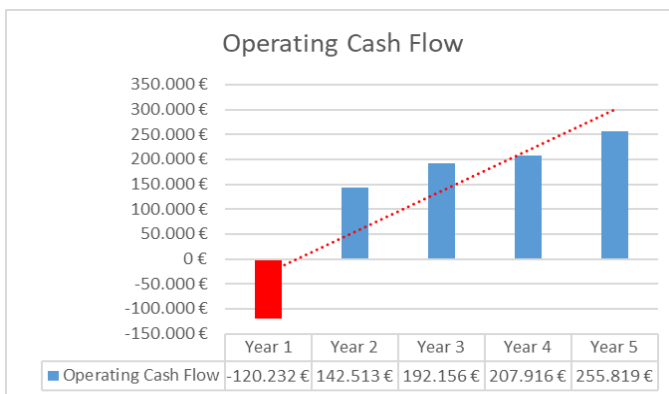
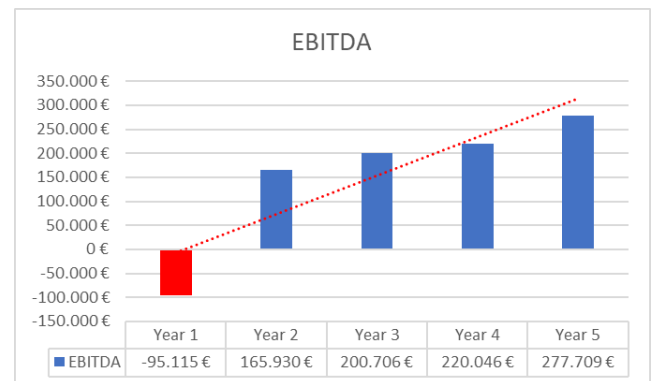
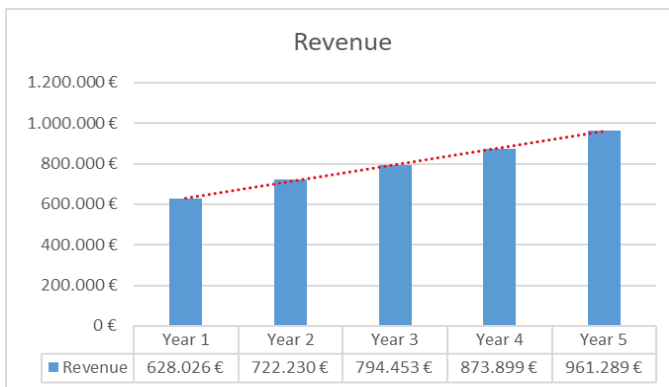
Table 10.3 Pessimistic scenario Sales forecast

	year 1	year 2	year 3	year 4	year 5
Scenario 3 – Pessimistic	628.026 €	722.230 €	794.453 €	873.899 €	961.289 €

### 10.3.1 Pessimistic scenario, Risk-free

- ISO 17025 accreditation at the end of 1<sup>st</sup> year of operations
- During 1<sup>st</sup> year of operation, only 30% capacity is achieved for the internally developed testing methods.

Figure 10.5 Pessimistic Scenario -Risk free results



### 10.3.2 Pessimistic scenario, delay Risk for ISO 17025 accreditation

- ISO 17025 accreditation at the end of 2<sup>nd</sup> year of operations
- During first 2 years of operation, only 30% capacity is achieved for the internally developed testing methods.

Figure 10.6 Pessimistic Scenario -Accreditation Delay Risk results



## 11.Scenario Evaluation

Evaluating all examines scenarios (Table 11.1) presents the evaluates results for each examined scenario of business establishment

### Cash-Flow

None of the scenarios achieve positive cash flow form year one. Due to the necessary incubation and development period (development phases 2 and 3) investors will have to additionally support a possible investment with additional cash during the first 1-2 years (depending the applied scenario) through either share capital or dept capital (long term dept).

### Net Present Value (NPV)

NPV calculations were made using a desired discount rate of 5%, as a typical expected return for a competitive investment with a typical risk. Positive net present values indicate that invested will be profitable and therefore attractive to undertake, while cases with  $NPV < 0$  (“Scenario 2, Base-accreditation Risk” & “Scenario 3, Pessimistic -accreditation Risk”) should be realistically evaluated as not profitable.

### Payback Time

“Scenario 2, Base-accreditation Risk” & “Scenario 3, Pessimistic -accreditation Risk” alternatives (also to be rejected due to negative NPV performance) show a Payback time of repaying initial investment long extended than the 5-year horizon of the project. All other scenarios include a payback between the 4<sup>th</sup> and 5<sup>th</sup> year or the investment (within project’s duration) which is considered acceptable

**Table 11.1 Scenario evaluation**

	Total achieved revenue in 5th year	Positive Cash-Flow	NPV	IRR	PI	PayBack period
Scenario 1 Optimistic -Risk free	1.418.702 €	start from Year 2	1.503.036 €	25,55%	1,31	Year 4
Scenario 1 Optimistic -accreditation Risk	1.418.702 €	start from Year 2	577.763 €	1,31%	0,04	Year 5
Scenario 2 Base -Risk free	1.063.561 €	start from Year 2	471.236 €	9,88%	0,41	Year 5
Scenario 2 Base -accreditation Risk	1.063.561 €	start from Year 3	-377.098 €	-7,77%	-0,33	>5 years
Scenario 3 Pessimistic -Risk free	961.289 €	start from Year 2	40.507 €	1,31%	0,04	Year 5
Scenario 3 Pessimistic -accreditation Risk	961.289 €	start from Year 3	-478.036 €	-10,79%	-0,42	>5 years

### **Internal Rate of Return (IRR)**

IRR calculations as a profitability estimation of the potential investment, show that “*Scenario 1, Optimistic-Risk free*” and “*Scenario 2, Base-Risk free*” have an IRR greater than the desired discount rate of 5%, making them attractive to invest in.

“*Scenario 1, Optimistic -accreditation Risk*” & “*Scenario 3, Pessimistic-Risk free*” are both having a positive IRR, indicating a profitable investment but not as profitable as an alternative risk-free (and therefore more attractive) investment (taking concern a risk-free rate of 4,3%<sup>71</sup>).

### **Profitability Index (PI)**

Profitability Index as a decision-making rule favors “*Scenario 1, Optimistic-Risk free*” since its >1 PI ratio indicates a profitable investment.

## **12. Conclusion, constrains and Future development**

Current business operation in the Romania market is both critical to organization’s profitability but also unstable. Organization holds a small percentage, of ■■■%, of the estimated market size, having though no realistic capabilities or resources to substantially increase it. In addition to this issue, the recent competition environment’s development, during the last five years, threatens AGROLAB RDS’ presence in the country.

Romania’s TICS market maturity and size favors a possible start-up investment for a locally established laboratory facility aligned with AGROLAB RDS’ values and strategy. Proposed start-up project includes an initial investment to create a fully autonomous laboratory infrastructure within a 5-year horizon, able to penetrate the Romania market and become a pillar for whole organization’s further growth and expansion in the Balkan area.

Examined scenarios show that proposed project is sustainable and within AGROLAB RDS’ capabilities and know-how, offering the desired business growth in the country in a form of a fully autonomous and self-managed private laboratory provider.

After the projected 5-year period, company should reassess its strategic vision, based on achieved performance and the updated market trends and most probably would have to invest additionally for further development of the company.

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<sup>71</sup> <https://www.statista.com/statistics/885838/average-risk-free-rate-greece/>

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## **14. Appendices**

**Appendix I : Competition**

**Appendix II : Milestones**

**Appendix III : Expenses**

**Appendix IV : List of analytical testing services**

**Appendix V : Sales and Revenue data**

**Appendix VI : Mail communication with AGROLAB RDS**

**Appendix VII : Excel files of Expenses, Sales forecasts, Revenues**

# Appendix I

## List of main domestic anticipated competitors

ALMARO MED SRL.....	- 2 -
BACTOLACT SRL.....	- 4 -
CARTARE AGROCHIMICA SRL.....	- 6 -
INDUSTRY LAB SRL.....	- 7 -
J.S. HAMILTON ROMANIA SRL.....	- 8 -
MANOR LABORATORY CENTER SRL .....	- 9 -
WESSLING Romania SRL .....	- 11 -
BIOSANIVET SRL.....	- 13 -
CONTROL UNION ROMANIA SRL .....	- 15 -
ECO LAB CONSULT SRL .....	- 17 -
GIVAROLI IMPEX SRL .....	- 19 -
ICA Research & Development (ICA R&D) SRL.....	- 21 -
COTECNA ROMANIA SRL.....	- 22 -
EUROFINS FOOD TESTING SRL.....	- 24 -
SGS ROMANIA SA.....	- 25 -
I.M.U. LABORATORIES SRL.....	- 27 -
ALS Environmental Romania .....	- 29 -
GERAL DATA & GRAPHS .....	- 31 -
Potential domestic competition.....	- 31 -
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Competitor's location of establishment .....	- 33 -
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Market Size Estimation.....	- 36 -
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	- 1 -

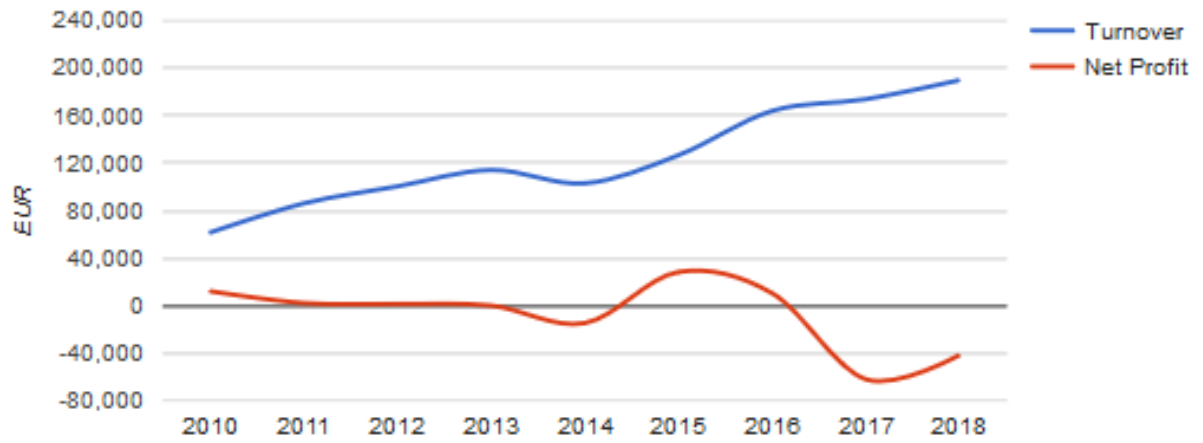
## ALMARO MED SRL

<b>Identification data for ALMARO MED SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	ALMARO MED SRL
Fiscal Code	18196121
Registry No.	J40/20569/2005
EUID	ROONRC.J40/20569/2005
Date of establishment	2005

<i>Year</i>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	189 773	-41 344	217 248	61 470	65 052	-90 241	11
2017	173 728	-61 872	179 141	72 455	57 260	-48 941	10
2016	163 888	10 531	114 131	86 596	40 346	13 309	7
2015	126 610	28 410	57 489	6 395	53 383	2 789	7
2014	102 967	-14 608	74 703	6 323	42 011	-25 864	7
2013	114 178	151	54 095	6 605	33 676	-11 250	6
2012	100 369	1 512	57 355	9 170	36 129	-11 545	6
2011	86 059	2 247	72 109	15 811	44 990	-10 785	5
2010	61 520	12 247	43 486	15 224	14 883	-13 138	3
2009	55 802	-4 609	56 945	14 115	16 876	-25 725	3
2008	36 616	-2 234	53 345	18 585	12 276	-22 246	4
2007	56 785	-4 948	51 125	20 204	8 830	-22 091	8
2006	58 039	-18 390	56 648	35 293	2 417	-18 301	8
2005	0	0	272	0	169	82	0



ALMARO MED SRL : Turnover vs Net Profit



Available Accreditation data ( <https://www.renar.ro> ) :

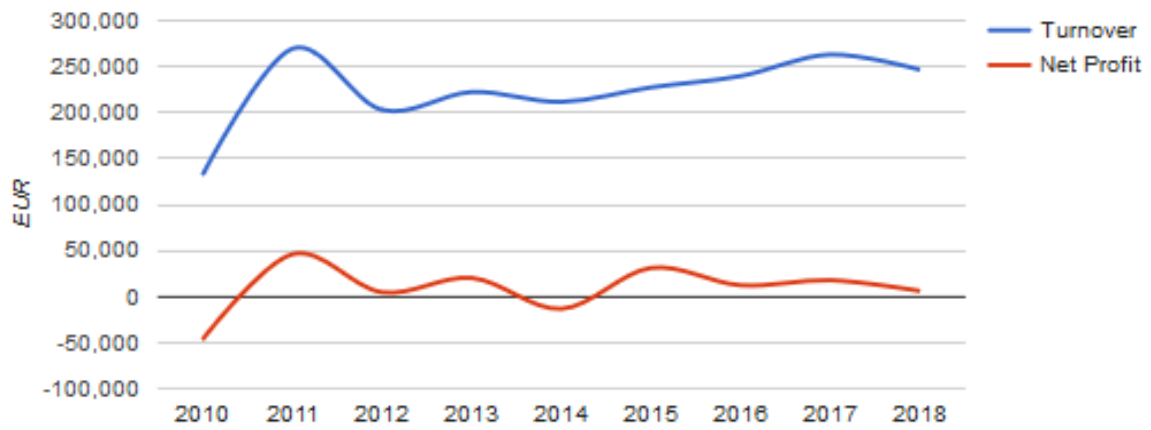
<https://www.renar.ro/files/OEC/download/LI%20923%20A%20ALMARO%20MED%202019.09.23.pdf>

## BACTOLACT SRL

<b>Identification data for BACTOLACT SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	BACTOLACT SRL
Fiscal Code	443580
Registry No.	J40/481/1991
EUID	ROONRC.J40/481/1991
Date of establishment	1991

<i>Year</i>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	246 445	5 920	35 351	167 276	90 041	220 196	14
2017	262 933	17 593	20 790	161 262	91 986	230 685	14
2016	239 521	12 094	20 358	149 802	103 646	231 272	14
2015	227 213	30 934	20 616	149 464	92 960	219 982	14
2014	211 483	-13 539	25 680	126 197	74 084	172 758	15
2013	222 220	20 034	17 842	132 272	73 600	186 189	15
2012	202 736	4 465	9 638	134 633	44 511	168 255	17
2011	269 406	45 880	15 414	133 278	54 057	169 993	18
2010	132 645	-46 418	63 665	135 379	26 507	96 278	12
2009	188 440	-43 950	5 715	121 570	30 720	144 606	18
2008	290 546	70 426	25 225	42 065	121 004	147 428	18
2007	193 765	23 340	36 879	56 518	70 027	89 667	16
2006	155 777	8 785	16 218	45 684	38 404	74 143	17
2005	124 515	17 910	13 607	44 030	17 312	60 107	16

## BACTOLACT SRL: Turnover vs Net Profit



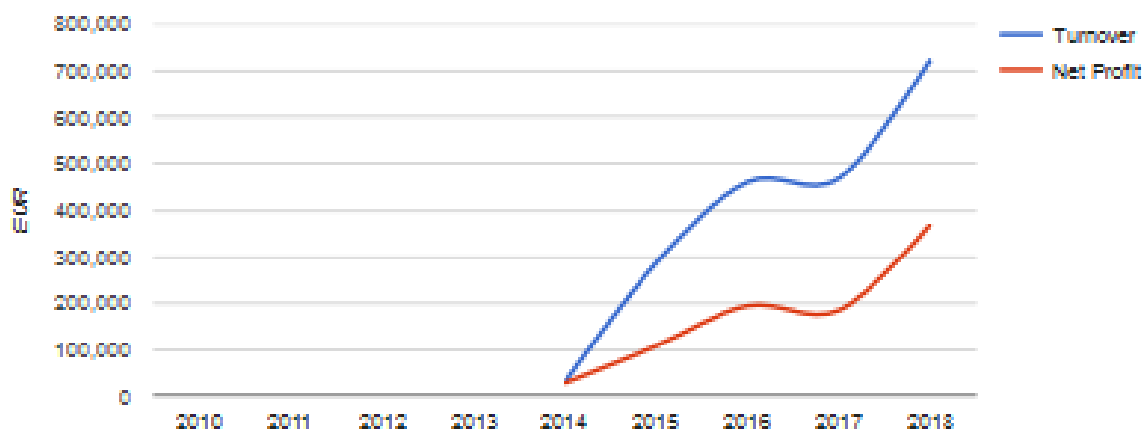
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## CARTARE AGROCHIMICA SRL

Identification data for CARTARE AGROCHIMICA SRL (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	CARTARE AGROCHIMICA SRL
Fiscal Code	33186628
Registry No.	J40/6001/2014
EUID	ROONRC.J40/6001/2014
Date of establishment	2014

Year	Turnover	Net Profit	Debts	Fixed Assets	Current Assets	Equity Ownership	Employees (average no.)
2018	725 336	369 506	419 816	821 253	349 052	543 094	11
2017	468 510	184 173	172 777	299 440	62 281	206 387	17
2016	460 103	193 928	111 868	190 129	109 924	188 185	18
2015	286 109	107 282	50 791	82 347	101 704	134 144	4
2014	28 078	27 072	8 089	0	36 758	27 117	0

### CARTARE AGROCHIMICA SRL: Turnover vs Net Profit



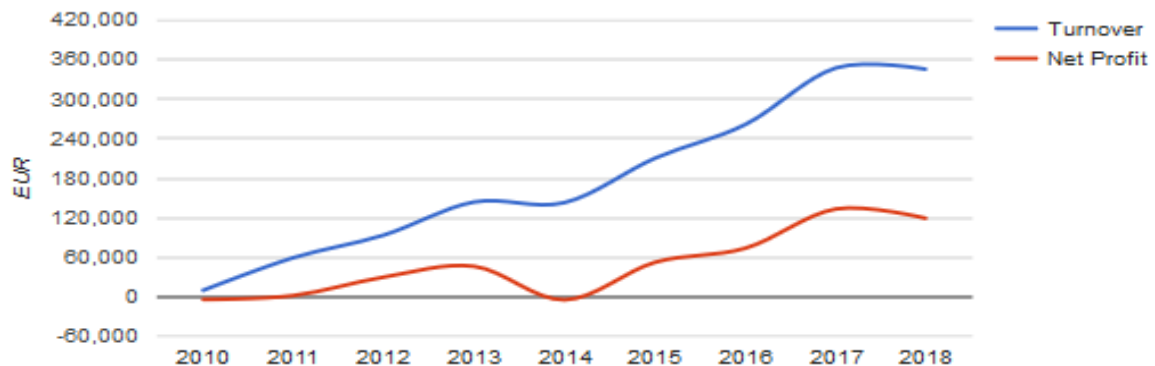
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## INDUSTRY LAB SRL

<b>Identification data for INDUSTRY LAB SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	INDUSTRY LAB SRL
Fiscal Code	26208898
Registry No.	J40/10924/2009
EUID	ROONRC.J40/10924/2009
Date of establishment	2009

<i>Year</i>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	345 093	118 843	58 149	23 722	169 424	134 998	14
2017	347 444	133 394	40 127	27 077	146 514	133 491	12
2016	261 723	73 910	41 428	16 620	98 687	73 984	10
2015	210 413	52 436	26 072	7 920	70 641	52 508	9
2014	142 987	-4 575	22 270	8 063	55 997	41 819	7
2013	143 893	46 303	24 966	5 470	65 724	46 367	7
2012	93 581	29 882	19 784	6 496	41 049	27 761	5
2011	59 273	1 883	24 974	7 139	12 351	-2 174	5
2010	9 525	-4 006	35 297	8 018	8 851	-4 091	2
2009	0	-134	315	119	110	-86	1

INDUSTRY LAB SRL: Turnover vs Net Profit



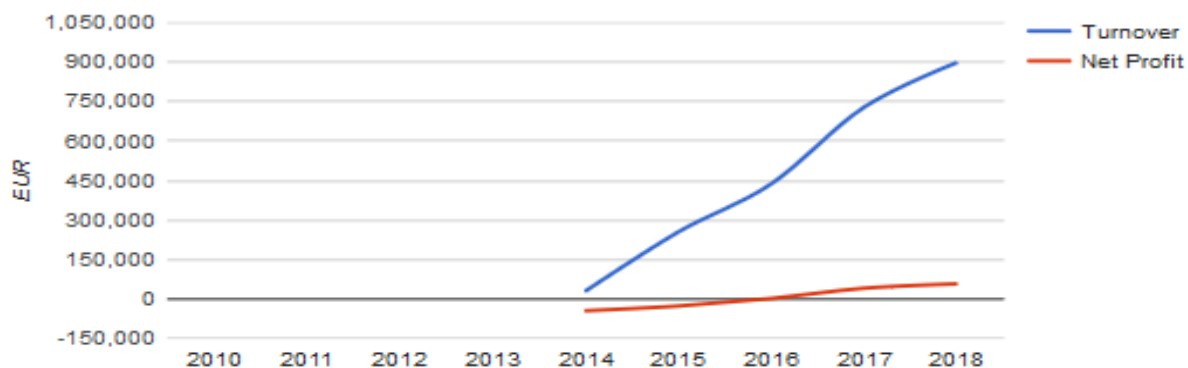
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## J.S. HAMILTON ROMANIA SRL

Identification data for J.S. HAMILTON ROMANIA SRL (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	J.S. HAMILTON ROMANIA SRL
Fiscal Code	33422877
Registry No.	J40/8823/2014
EUID	ROONRC.J40/8823/2014
Date of establishment	2014

Year	Turnover	Net Profit	Debts	Fixed Assets	Current Assets	Equity Ownership	Employees (average no.)
2018	898 677	57 285	337 072	144 921	334 993	166 748	14
2017	729 201	40 746	290 518	67 840	308 870	113 144	15
2016	437 544	1 704	272 001	68 364	253 253	74 288	11
2015	254 885	-26 859	80 016	45 199	99 155	72 850	6
2014	29 889	-44 846	26 750	25 581	102 167	105 753	3

HAMILTON ROMANIA SRL: Turnover vs Net Profit



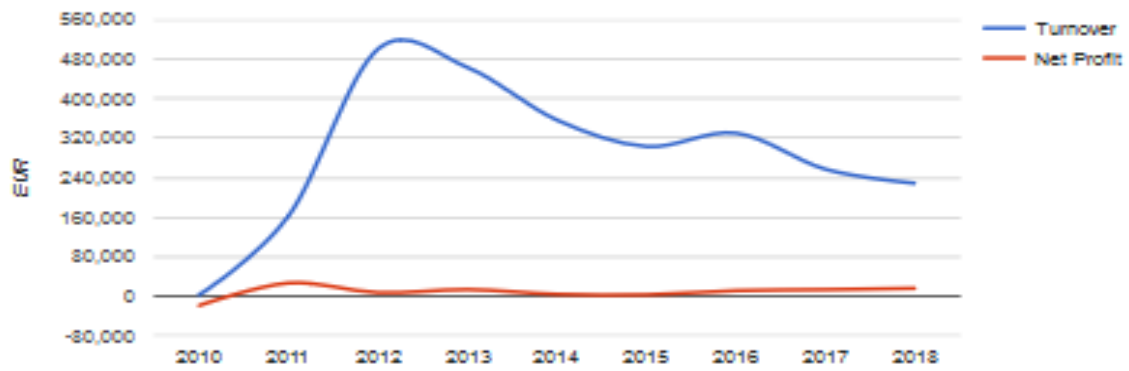
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## MANOR LABORATORY CENTER SRL

<b>Identification data for MANOR LABORATORY CENTER SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	MANOR LABORATORY CENTER SRL
Fiscal Code	18905827
Registry No.	J40/2771/2010
EUID	ROONRC.J40/2771/2010
Date of establishment	2006

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	228 343	15 565	657 753	617 671	991 616	39 201	15
2017	256 670	12 904	72 161	30 423	63 649	23 658	14
2016	330 033	10 849	104 338	33 687	80 849	11 034	17
2015	302 946	2 434	30 345	31 020	97 166	98 119	16
2014	356 388	3 395	36 141	43 320	88 284	96 591	18
2013	463 038	13 029	62 849	55 696	100 106	93 141	18
2012	500 630	6 727	102 813	59 842	116 606	81 125	19
2011	162 046	26 311	107 792	44 983	139 084	76 275	10
2010	1 966	-19 402	15 374	585	65 159	50 371	1
2009	56 538	35 977	8 504	771	78 440	70 707	1
2008	65 151	36 637	4 907	1 007	40 748	36 848	1
2007	93 029	75 506	23 041	0	101 296	78 255	3
2006	3 844	2 728	1 987	204	4 719	2 935	1

## MANOR LABORATORY CENTER SRL: Turnover vs Net Profit



Accreditation data ( <https://www.renar.ro> ) :  
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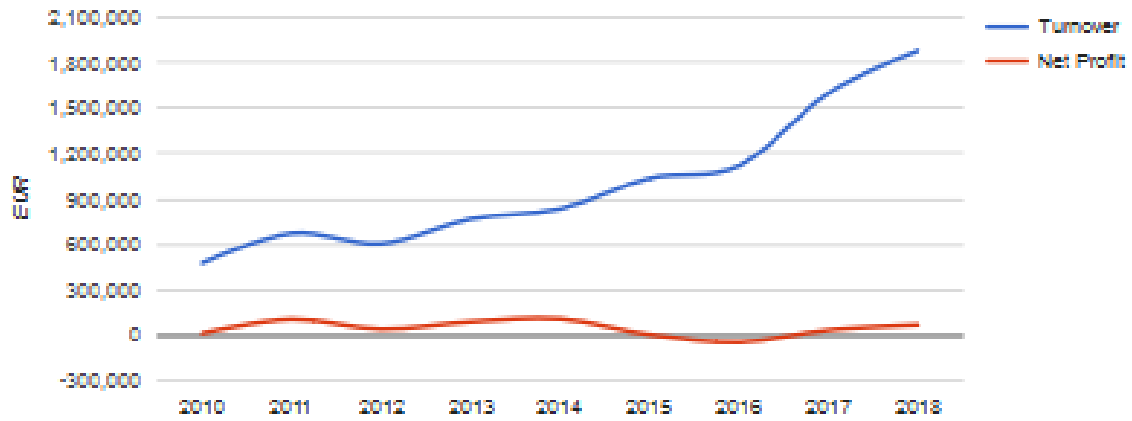


## WESSLING Romania SRL

<b>Identification data for WESSLING ROMANIA SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	WESSLING ROMANIA SRL
Fiscal Code	15444907
Registry No.	J26/590/2003
EUID	ROONRC.J26/590/2003
Date of establishment	2003

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	1 879 440	69 184	518 648	322 192	514 557	333 841	79
2017	1 599 463	35 612	475 079	280 827	440 436	264 896	67
2016	1 118 830	-45 052	398 334	282 843	344 406	233 388	52
2015	1 037 040	4 324	340 402	264 999	345 652	279 461	47
2014	834 175	108 163	289 753	472 171	317 962	506 239	26
2013	766 971	88 972	352 281	434 382	308 859	396 055	25
2012	605 887	41 290	164 100	269 629	197 620	310 966	26
2011	673 269	105 714	199 580	211 162	253 914	277 279	23
2010	476 943	14 321	217 138	192 790	189 838	172 880	23
2009	484 965	7 778	275 064	200 240	223 275	160 916	19
2008	592 251	77 138	200 116	147 482	207 891	162 690	16
2007	483 016	86 539	191 946	106 441	182 029	96 523	11
2006	395 775	39 102	155 622	74 194	84 498	10 658	9
2005	248 670	2 239	127 181	40 639	49 563	-26 159	6

## WESSLING ROMANIA SRL: Turnover vs Net Profit



Accreditation data ( <https://www.renar.ro> ) :

<https://www.renar.ro/files/OEC/download/LI%20643%20A1%20WESSLING%202018.11.27.pdf>

<https://www.renar.ro/files/OEC/download/LI%20643%20A2%20WESSLING%20LPM%202018.11.27.pdf>

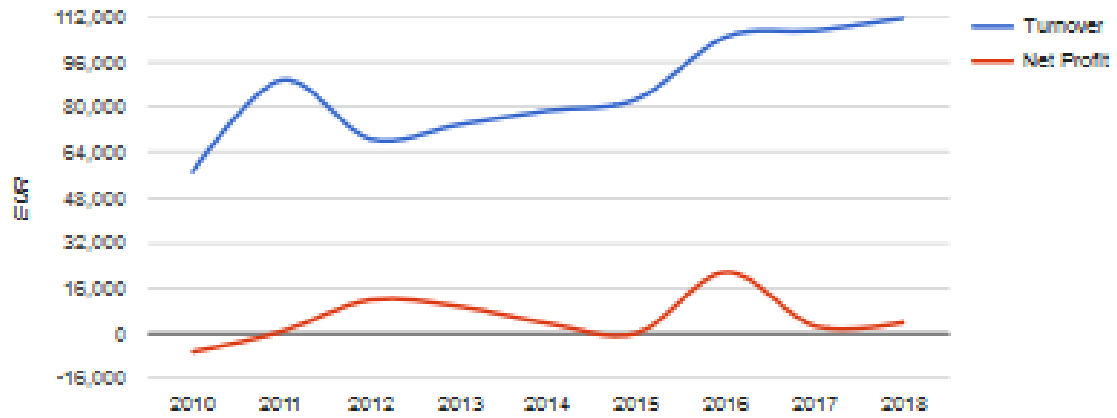
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## BIOSANIVET SRL

<b>Identification data for BIOSANIVET SRL</b> (source: <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	BIOSANIVET SRL
Fiscal Code	19140269
Registry No.	J13/3244/2006
EUID	ROONRC.J13/3244/2006
Date of establishment	2006

<i>Year</i>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	111 711	3 886	56 681	7 311	29 919	-19 452	7
2017	107 233	2 411	56 682	9 731	23 592	-23 359	7
2016	105 058	21 621	97 127	4 820	65 865	-26 443	8
2015	83 000	50	101 718	4 898	48 581	-48 240	8
2014	78 901	3 437	94 939	9 104	37 088	-48 747	7
2013	73 924	9 465	93 116	13 887	27 076	-52 153	8
2012	68 871	11 802	170 110	23 291	84 422	-62 397	8
2011	89 663	582	166 535	28 839	61 625	-76 071	9
2010	57 099	-6 677	110 522	28 803	4 441	-77 278	9
2009	12 571	-43 239	111 000	33 007	6 448	-71 546	5
2008	0	-22 383	59 613	28 948	632	-30 033	1
2007	0	-8 437	11 490	2 580	466	-8 445	1

## BIOSANIVET SRL: Turnover vs Net Profit



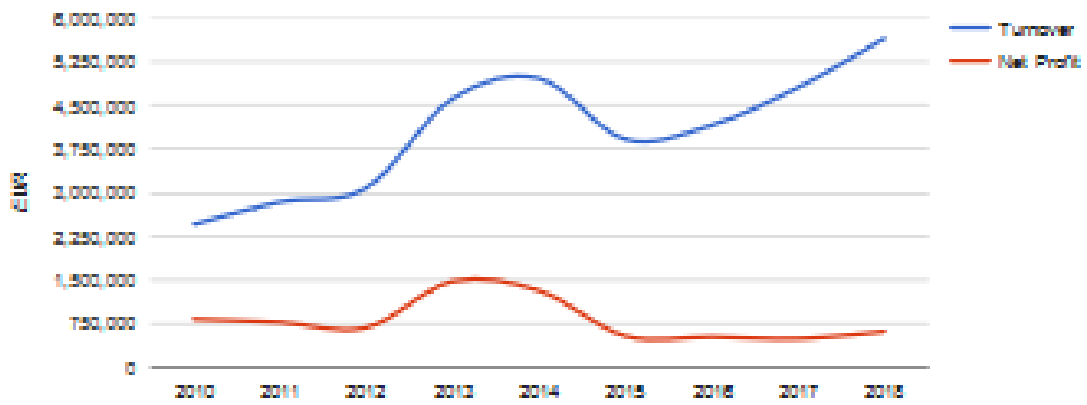
Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%20930%20A%20BIOSANIVET%202019.10.10.pdf>

## CONTROL UNION ROMANIA SRL

<b>Identification data for CONTROL UNION ROMANIA SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	CONTROL UNION ROMANIA SRL
Fiscal Code	14669413
Registry No.	J13/1324/2002
EUID	ROONRC.J13/1324/2002
Date of establishment	2002

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	5 661 481	610 635	336 719	407 921	3 549 889	3 681 518	169
2017	4 808 750	485 138	228 604	320 618	4 422 595	4 568 211	0
2016	4 162 649	518 638	205 532	328 145	4 007 808	4 189 711	142
2015	3 913 506	530 031	150 039	413 014	3 567 007	3 845 765	135
2014	4 967 382	1 311 966	258 090	428 942	4 115 140	4 302 802	126
2013	4 620 495	1 475 452	249 945	312 719	2 914 381	2 989 102	105
2012	3 080 854	677 464	152 911	318 134	2 117 128	2 291 242	0
2011	2 838 134	769 415	256 688	346 754	2 087 318	2 187 239	81
2010	2 453 004	823 351	172 617	311 694	1 280 920	1 430 300	81
2009	2 252 270	1 000 397	106 358	211 913	671 262	780 023	66
2008	1 388 272	307 216	924 127	129 327	569 116	-225 684	67
2007	700 834	-296 836	845 822	167 927	120 669	-588 253	61
2006	1 124 292	-69 719	737 360	213 112	242 701	-311 108	62
2005	666 558	12 698	555 004	190 806	168 857	-221 997	42

## CONTROL UNION ROMANIA SRL: Turnover vs Net Profit



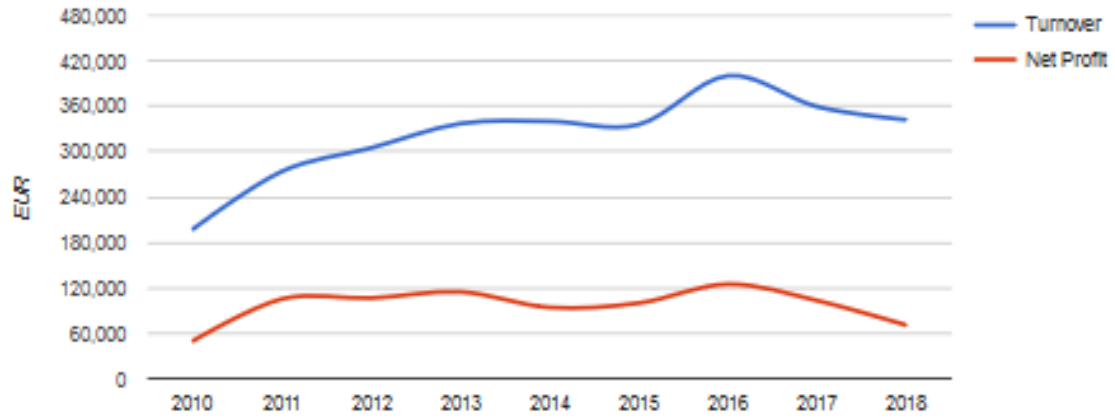
Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%20410%20A%20CONTROL%20UNION%20ROMANIA%202018.03.22.pdf>

## ECO LAB CONSULT SRL

<b>Identification data for ECO LAB CONSULT SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	ECO LAB CONSULT SRL
Fiscal Code	15948866
Registry No.	J40/16132/2003
EUID	ROONRC.J40/16132/2003
Date of establishment	2003

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	342 046	70 513	40 936	97 946	81 662	139 540	12
2017	359 265	103 045	73 526	116 396	86 161	129 907	12
2016	400 321	124 866	87 020	128 752	85 822	128 471	13
2015	335 838	99 825	52 563	67 957	87 093	103 605	12
2014	340 013	94 069	42 398	80 946	76 786	116 120	12
2013	337 071	114 651	34 364	91 142	70 514	128 336	11
2012	304 851	106 425	29 349	101 509	53 380	126 315	9
2011	273 904	105 318	62 862	107 684	66 628	111 450	8
2010	197 214	49 535	49 605	70 527	45 282	66 203	8
2009	159 045	34 572	55 390	33 059	56 960	34 629	8
2008	166 944	45 639	41 927	42 461	50 908	51 562	7
2007	145 150	46 922	48 075	53 956	41 108	46 989	6
2006	94 825	36 295	13 116	23 300	26 182	36 366	6
2005	44 501	14 358	10 406	19 047	5 783	14 424	5

## ECO LAB CONSULT SRL: Turnover vs Net Profit



Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%20447%20A1%20ECO%20LAB%20CONSULT%202018.11.05.pdf>

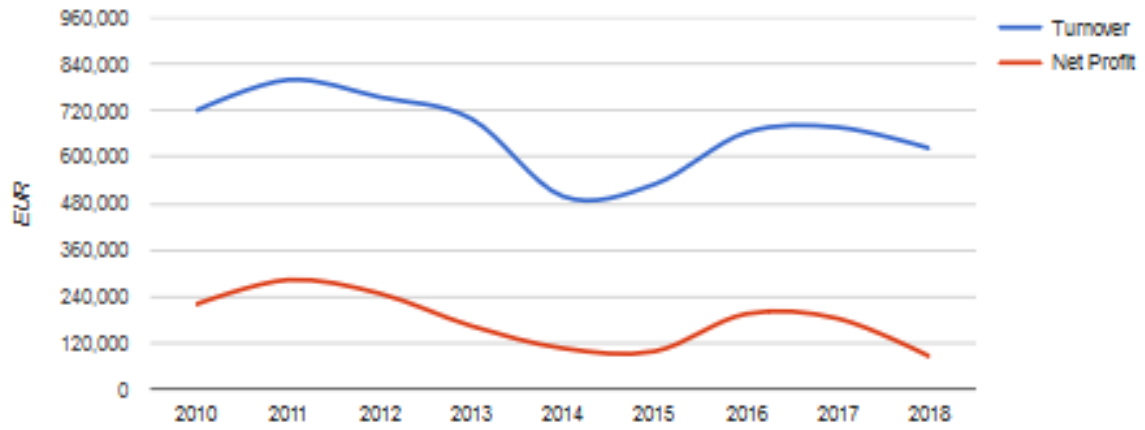


## GIVAROLI IMPEX SRL

<b>Identification data for GIVAROLI IMPEX SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	GIVAROLI IMPEX SRL
Fiscal Code	451850
Registry No.	J40/2630/1992
EUID	ROONRC.J40/2630/1992
Date of establishment	1992

<i>Year</i>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	622 371	84 996	331 563	164 389	253 508	86 334	20
2017	676 763	182 938	327 030	189 084	324 493	184 277	19
2016	663 549	194 962	315 120	174 012	341 293	196 336	17
2015	529 613	98 117	201 611	80 070	234 243	99 497	18
2014	498 189	106 071	242 209	119 784	244 913	107 463	19
2013	698 519	163 552	220 217	109 004	297 349	164 943	20
2012	754 355	247 417	172 872	125 442	349 120	248 826	21
2011	799 363	282 859	70 234	186 736	257 270	284 304	21
2010	719 989	219 973	127 033	231 250	273 620	261 285	16
2009	761 083	238 198	111 908	269 768	323 390	327 364	16
2008	661 217	221 945	129 699	508 194	120 604	316 549	16
2007	546 660	205 403	330 919	362 206	175 845	207 132	12
2006	413 630	166 141	386 569	297 959	253 575	1 845	10
2005	353 163	175 283	298 332	214 825	177 267	1 559	10

## GIVAROLI IMPEX SRL: Turnover vs Net Profit



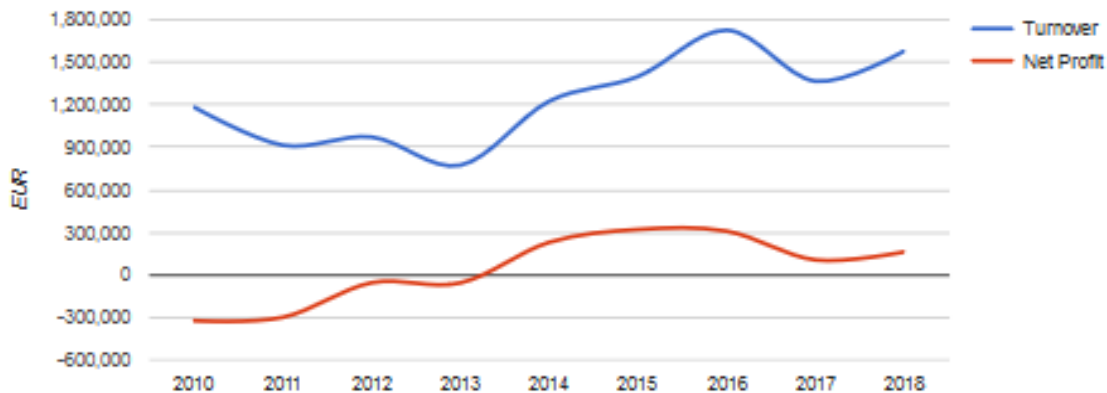
Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%20342%20A1%20GIVAROLI%20IMPEX%202017.05.30.pdf>

## ICA Research & Development (ICA R&D) SRL

Identification data for ICA RESEARCH & DEVELOPMENT ICA R & D SRL (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	ICA RESEARCH & DEVELOPMENT ICA R & D SRL
Fiscal Code	25627251
Registry No.	J40/6478/2009
EUID	ROONRC.J40/6478/2009
Date of establishment	2009

Year	Turnover	Net Profit	Debts	Fixed Assets	Current Assets	Equity Ownership	Employees (average no.)
2018	1 579 130	162 036	126 432	648 915	846 339	1 341 724	52
2017	1 365 025	105 148	81 948	464 482	845 962	1 231 411	47
2016	1 724 851	307 925	228 122	509 591	873 165	1 155 678	46
2015	1 398 257	320 043	135 380	112 147	872 991	850 864	46
2014	1 224 601	229 610	104 714	73 505	565 764	535 842	45
2013	772 686	-56 491	101 225	121 375	284 870	306 055	37
2012	971 725	-55 250	108 085	208 623	265 941	367 130	44
2011	913 644	-299 388	257 345	433 032	256 195	433 037	55
2010	1 182 548	-322 882	367 478	636 017	468 403	737 890	64
2009	679 143	1 285	380 569	817 971	502 911	969 191	60

ICA RESEARCH & DEVELOPMENT ICA R & D SRL: Turnover vs Net Profit



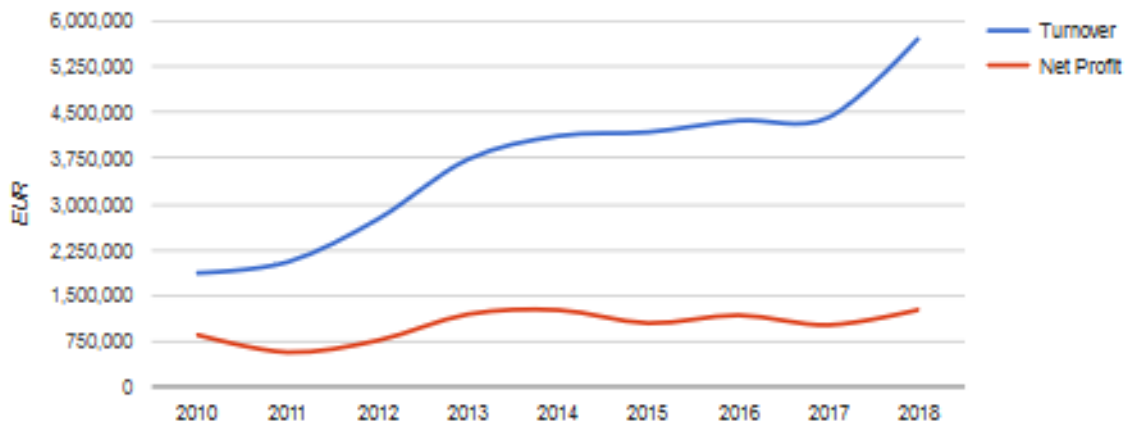
Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%20871%20A%20ICA%20R&D%202018.05.03.pdf>

## COTECNA ROMANIA SRL

<b>Identification data for COTECNA ROMANIA SRL</b> (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	COTECNA ROMANIA SRL
Fiscal Code	9777575
Registry No.	J13/2156/1997
EUID	ROONRC.J13/2156/1997
Date of establishment	1997

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	5 721 946	1 268 149	316 326	992 366	2 782 340	3 515 224	133
2017	4 417 544	1 017 002	326 991	1 123 538	1 890 364	2 759 371	108
2016	4 364 399	1 177 331	341 867	1 347 439	954 058	2 048 525	113
2015	4 176 534	1 046 451	443 400	1 824 383	2 685 325	4 174 711	111
2014	4 113 319	1 262 119	604 862	1 675 759	2 716 043	3 815 736	111
2013	3 730 578	1 193 503	577 241	1 408 426	2 265 912	3 116 474	108
2012	2 750 220	763 215	255 288	826 098	1 481 856	2 058 623	105
2011	2 047 668	569 917	273 618	821 901	1 057 170	1 606 337	103
2010	1 868 564	856 325	220 707	529 312	1 321 204	1 631 616	49
2009	1 252 473	471 384	80 672	253 242	886 834	1 064 042	49
2008	1 140 798	431 883	82 033	211 869	758 463	889 400	44
2007	719 662	172 833	52 374	234 028	404 757	586 412	48
2006	859 859	276 130	55 381	315 684	385 711	648 521	48
2005	671 584	162 941	46 399	278 466	217 556	451 256	46

COTECNA ROMANIA SRL : Turnover vs Net Profit



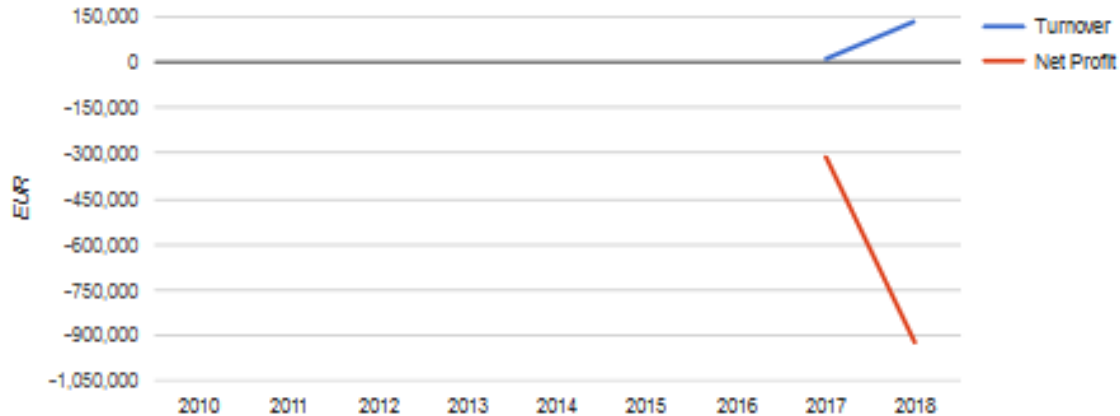
Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%201093%20A%20COTECNA%202019.10.18.pdf>

## EUROFINS FOOD TESTING SRL

Identification data for EUROFINS FOOD TESTING SRL (source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	EUROFINS FOOD TESTING SRL
Fiscal Code	36862821
Registry No.	J40/16748/2016
EUID	ROONRC.J40/16748/2016
Date of establishment	2016

Year	Turnover	Net Profit	Debts	Fixed Assets	Current Assets	Equity Ownership	Employees (average no.)
2018	135 808	-927 062	1 949 830	1 996 452	2 653 117	2 603 915	14
2017	10 743	-310 938	52 566	4 866	172 510	48 527	4

EUROFINS FOOD TESTING SRL : Turnover vs Net Profit



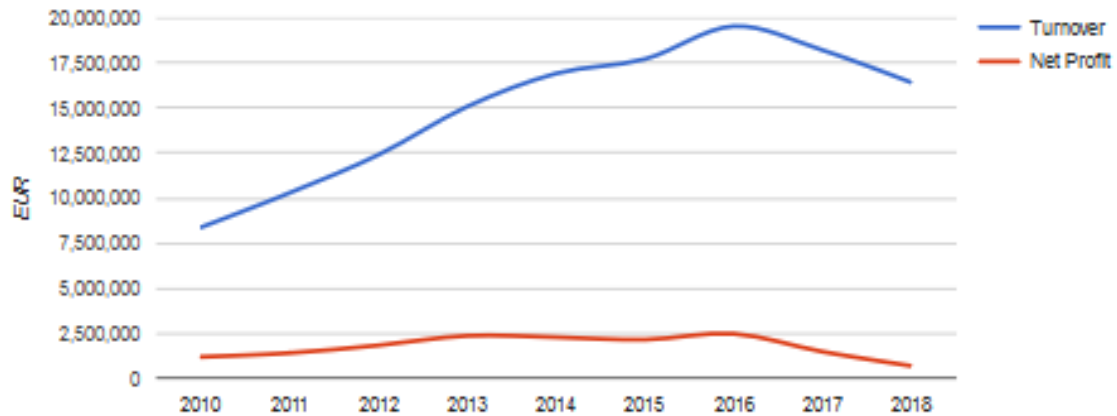
Accreditation data ( <https://www.renar.ro> ) : **NOT** ACCREDITED (28.12.2019)

## SGS ROMANIA SA

<b>Identification data for SGS ROMANIA SA</b> source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	SGS ROMANIA SA
Fiscal Code	3451552
Registry No.	J40/29074/1992
EUID	ROONRC.J40/29074/1992
Date of establishment	1992

<i>Year</i>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	16 408 928	695 142	2 404 807	3 012 122	5 502 851	5 685 631	496
2017	18 201 045	1 483 149	2 718 226	2 663 439	5 407 702	4 834 147	560
2016	19 528 276	2 478 374	3 520 248	2 302 415	5 279 175	3 438 516	563
2015	17 707 197	2 153 892	2 004 883	2 074 219	7 993 727	7 729 656	560
2014	16 910 571	2 285 643	2 416 285	2 039 613	6 036 884	5 682 174	499
2013	15 081 772	2 368 713	3 380 129	1 939 150	4 769 084	3 394 562	461
2012	12 406 193	1 837 466	1 577 821	1 450 283	2 947 969	2 882 313	409
2011	10 297 235	1 411 402	1 833 686	1 957 003	2 946 634	3 083 964	334
2010	8 382 648	1 196 465	1 681 546	2 044 084	2 551 903	2 882 650	255
2009	8 313 657	1 829 168	1 336 506	2 091 688	2 880 783	3 537 925	247
2008	7 078 825	1 247 151	776 359	1 928 060	2 144 407	3 183 906	261
2007	5 593 377	960 904	642 993	629 448	1 593 570	1 537 475	206
2006	5 654 953	973 003	953 473	816 877	1 728 221	1 560 736	198
2005	4 395 919	713 434	857 935	826 461	1 278 582	1 253 951	214

## SGS ROMANIA SA : Turnover vs Net Profit



Accreditation data ( <https://www.renar.ro> ) :

<https://www.renar.ro/files/OEC/download/LI%20713%20A1%20SGS%20ROMANIA%20Constanta%202019.04.16.pdf>

<https://www.renar.ro/files/OEC/download/LI%20713%20A3%20SGS%20ROMANIA%20Negoiesti%20%20EHS%202019.04.16.pdf>

<https://www.renar.ro/files/OEC/download/LI%20713%20A3%20SGS%20ROMANIA%20Negoiesti%20%20EHS%202019.04.16.pdf>

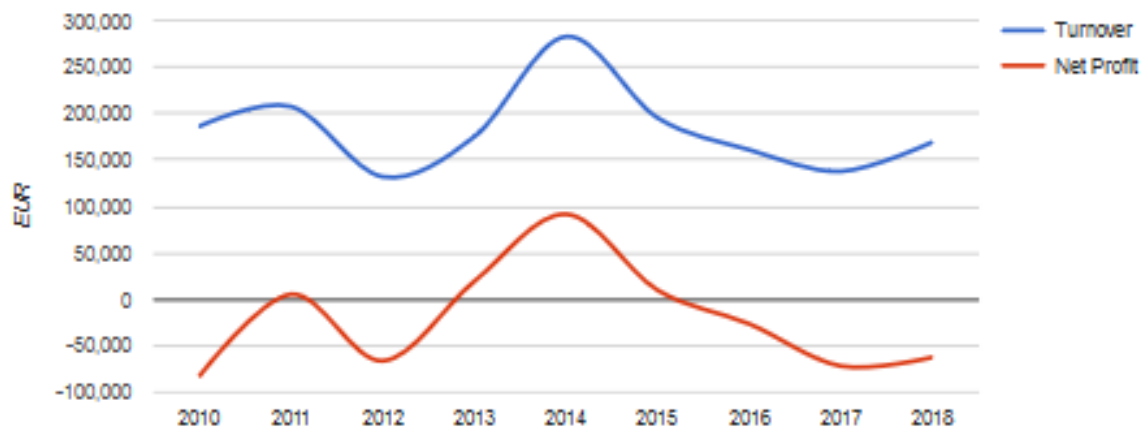


## I.M.U. LABORATORIES SRL

<b>Identification data for I.M.U. LABORATORIES SRL</b>	
source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	I.M.U. LABORATORIES SRL
Fiscal Code	20742993
Registry No.	J40/1186/2007
EUID	ROONRC.J40/1186/2007
Date of establishment	2007

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	169 227	-62 321	119 125	24 294	109 520	-106	5
2017	137 707	-71 749	23 653	42 995	77 683	62 271	5
2016	160 915	-26 410	15 471	70 634	138 644	137 521	4
2015	195 230	9 832	25 138	101 199	165 436	164 532	4
2014	282 737	91 611	46 981	132 715	169 382	156 164	5
2013	175 008	19 509	88 364	160 972	113 189	64 516	4
2012	131 853	-66 168	67 803	178 463	78 977	45 576	5
2011	207 407	5 528	258 025	211 539	330 400	114 564	6
2010	186 272	-82 330	367 710	38 845	147 929	-180 715	5
2008	225 797	24 464	214 937	27 769	174 870	-10 813	3
2007	28 082	-41 711	51 704	2 306	10 457	-38 941	3

## I.M.U. LABORATORIES SRL : Turnover vs Net Profit



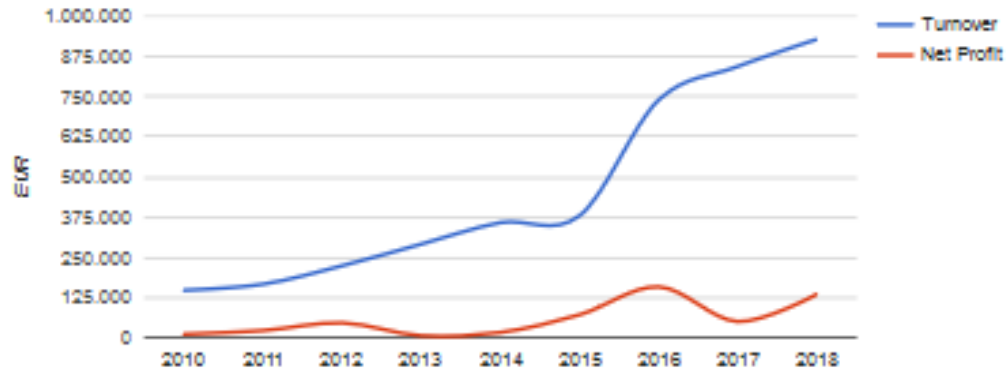
Accreditation data ( <https://www.renar.ro> ) :  
<https://www.renar.ro/files/OEC/download/LI%20707%20A%20%20I.M.U.%20LABORATORIES%202019.02.01.pdf>

## ALS Environmental Romania

<b>Identification data for ALS LIFE SCIENCES ROMANIA SRL</b> source : <a href="https://www.romanian-companies.eu">https://www.romanian-companies.eu</a> )	
Company Name	ALS LIFE SCIENCES ROMANIA SRL
Fiscal Code	1364018
Registry No.	J29/2420/1992
EUID	ROONRC.J29/2420/1992
Date of establishment	1992

<b>Year</b>	<b>Turnover</b>	<b>Net Profit</b>	<b>Debts</b>	<b>Fixed Assets</b>	<b>Current Assets</b>	<b>Equity Ownership</b>	<b>Employees (average no.)</b>
2018	928 344	135 717	587 122	609 570	622 646	623 177	28
2017	843 727	50 671	537 553	591 705	473 682	495 617	23
2016	739 331	158 590	116 856	224 466	392 780	456 566	22
2015	379 736	71 778	71 205	89 588	328 479	299 070	19
2014	358 322	16 793	212 652	401 924	152 052	229 208	16
2013	291 479	6 575	258 700	406 373	135 476	212 292	15
2012	224 208	46 617	328 574	451 178	176 704	214 826	10
2011	166 872	22 784	377 281	329 891	319 306	172 453	8
2010	147 940	11 296	186 437	239 809	94 129	150 810	10
2009	152 581	-9 243	201 811	255 997	93 853	149 569	11
2008	209 388	46 763	318 891	286 066	113 340	93 182	12
2007	235 191	109 212	282 854	299 842	143 465	160 452	9
2006	157 355	55 407	42 292	41 687	94 342	93 737	9
2005	79 965	30 903	17 146	20 889	53 139	56 882	9

## ALS Environmental Romania: Turnover vs Net Profit



Accreditation data ( <https://www.renar.ro> ) :

<https://www.renar.ro/files/OEC/download/LI%20%20828%20%20A2%20ALS%20LIFE%20SCIENCES%20ROMANIA%202017.10.23.pdf>

# GERAL DATA & GRAPHS

## Potential domestic competition

Company's Name	Location	Establishment	Number of employees	Turnover, in K € (2018)	Estimated Net Profit, in K € (2018)	Accreditation	Accreditation Scope	scope evaluation	
ALMARO MED SRL*	Bucharest	2005	11	190 €	- 41 €	Water Food	Water: 24 physicochemical indicators & 7 microbiological indicators Food : 14 microbiological indicators	basic	
BACTOLACT SRL*	Bucharest	1991	14	246 €	6 €	Water Food	Water & Food: 36 physicochemical & microbiological indicators Food : 14 microbiological indicators	basic	
CARTARE AGROCHIMICA SRL*	Bucharest	2014	11	725 €	370 €	Soil Fertilizers & Soil sampling	11 physicochemical indicators	competitive	
INDUSTRY LAB SRL*	Bucharest	2009	14	345 €	57 €	Water Food	14 microbiological indicators	basic	
J. S. HAMILTON * ROMANIA SRL	Bucharest	2014	14	859 €	29 €	Water Food	48 Microbiological indicators in Food, Water, Air	competitive	
	Cluj-Napoca (North Romania)								
MANOR LABORATORY CENTER SRL*	Bucharest	2006	15	228 €	16 €	Food	18 Chemical & Nutritional indicators in Food & 15 Microbiological indicators in Food,	basic	
WESSLING Romania SRL*	Mures	2003	79	1.880 €	69 €	Water , Soil Wastewater Food	91 Chemical & Contaminant indicators in Water, Soil & Wastewater 40 Chemical indicators in Food	competitive	
BIOSANIVET SRL*	Constanta	2006	7	112 €	4 €	Food	21 Chemical , Nutritional & Microbiological indicators in Food,	basic	
ECO LAB CONSULT SRL*	Bucharest	2003	12	342 €	70 €	Water	51 Chemical & Contaminant indicators in Water + 13 chemical indicators in Gaseous effluents	competitive	
ICA Research & Development (ICA R&D) SRL*	Bucharest	2009	52	1.580 €	162 €	Water Food	total 70 Chemical, Contaminant & Microbiological indicators in Food & Water + expected (after 2020) : - Pesticide residue testing - Contaminant testing - GMO testing	competitive	
EUROFINS FOOD TESTING SRL*	Bucharest	2016	14	136 €	327 €	pending (expected within 2020)	expected (within 2020) : - Chemical & Nutritional Testing - Microbiology testing - Pesticide residue testing - Contaminant testing - GMO testing	competitive	
I.M.U. LABORATORIES SRL*	Bucharest	2007	5	169 €	62 €	Water, Soil	19 accredited chemical indicators in water	basic	
CONTROL UNION ** ROMANIA SRL Inspection	Constanta	2002	169	4.390 €	546 €	Cereals + inspection activities	specific accredited chemical indicators in Cereals + GMO indicators	competitive	
GIVAROLI IMPEX SRL**	Bucharest	1992	20	622 €	85 €	Water , Soil + non-Food testing	68 Chemical & Contaminant indicators in Water & Soil + 27 chemical indicators in Gaseous effluents	competitive	
COTECNA / TIMEX SURVEYORS SRL Inspection**	Constanta	1997	133	5.722 €	1.268 €	Cereals + inspection activities	specific accredited chemical indicators in Cereals + GMO indicators + Pesticide residues indicators	competitive	
ALS LIFE SCIENCES ROMANIA SRL**	Ploiești	1992	28	928 €	135 €	Water, Soil + non-Food testing	accredited chemical indicators in Water & Soil	competitive	
SGS ROMÂNIA SA**	Constanta	1992	496	16.409 €	695 €	Oil seeds, Cereals, Flour + non-Food testing + Inspection activities	Specific accredited chemical indicators in Cereals & Oil seeds + Pesticide residue and Mycotoxin analysis	competitive	
	Brazi						32 accredited indicators in water		
Turnover sum 1 *				6.812 €					
Turnover sum 2 **				28.071 €					
Total Competition Turnover				34.883 €					

\* competition offering only Food, Feed & Soil testing services

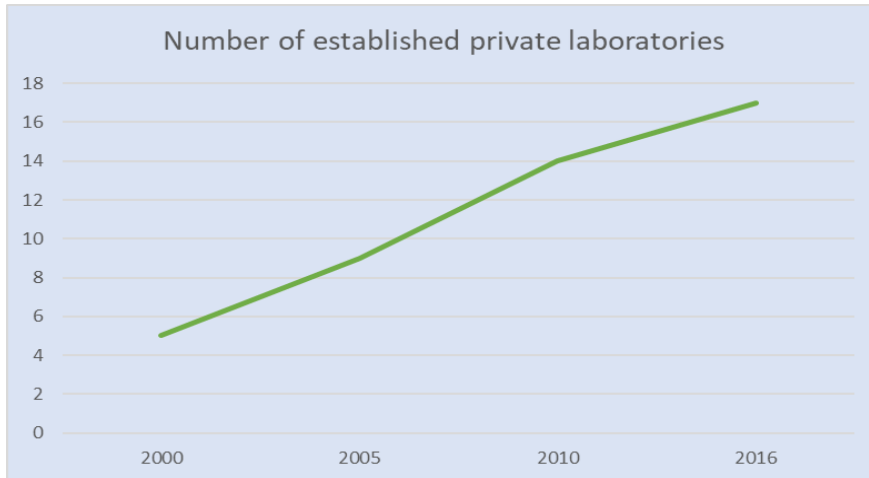
\*\* competition additionally offering Inspection, Consulting & Non-Food analysis services

## Potential domestic competition's revenue

	ALMARO MED SRL	BACTOLACT SRL	CARTARE AGROCHIMICA SRL	INDUSTRY LAB SRL	J.S. HAMILTON ROMANIA SRL	MANOR LABORATORY CENTER SRL	WESLING Romania SRL	BIOSANIVET SRL	CONTROL UNION ROMANIA SRL	ECOLAB CONSULT SRL	GIVAROLI IMPEX SRL	ICA Research & Development (CA R&D) SRL	COTECNA ROMANIA SRL	EUROPINS FOOD TESTING SRL	SGSROMANIA SA	IMU LABORATORIES SRL	ALS LIFE SCIENCES ROMANIA SRL
2018	189.773 €	246.445 €	725.336 €	345.093 €	898.677 €	228.343 €	1.879.440 €	111.711 €	5.661.481 €	342.046 €	622.371 €	1.579.130 €	5.721.946 €	135.808 €	16.408.928 €	169.227 €	928.344 €
2017	173.728 €	262.933 €	468.510 €	347.444 €	729.201 €	256.670 €	1.599.463 €	107.233 €	4.808.750 €	359.265 €	676.763 €	1.365.025 €	4.417.544 €	10.743 €	18.201.045 €	137.707 €	843.727 €
2016	163.888 €	239.521 €	460.103 €	261.723 €	437.544 €	330.033 €	1.118.830 €	105.058 €	4.162.649 €	400.321 €	663.549 €	1.724.851 €	4.364.399 €		19.528.276 €	160.915 €	739.331 €
2015	126.610 €	227.213 €	286.109 €	210.413 €	254.885 €	302.946 €	1.037.040 €	83.000 €	3.913.506 €	335.838 €	529.613 €	1.398.257 €	4.176.534 €		17.707.197 €	195.230 €	379.736 €
2014	102.967 €	211.483 €	28.078 €	142.987 €	29.889 €	356.388 €	834.175 €	78.901 €	4.967.382 €	340.013 €	498.189 €	1.224.601 €	4.113.319 €		16.910.571 €	282.737 €	358.322 €
2013	114.178 €	222.220 €		143.893 €		463.038 €	766.971 €	73.924 €	4.620.495 €	337.071 €	698.519 €	772.686 €	3.730.578 €		15.081.772 €	175.008 €	291.479 €
2012	100.369 €	202.736 €		93.581 €		500.630 €	605.887 €	68.871 €	3.080.854 €	304.851 €	754.355 €	971.725 €	2.750.220 €		12.406.193 €	131.853 €	221.208 €
2011	86.059 €	269.406 €		59.273 €		162.046 €	673.269 €	89.663 €	2.838.134 €	273.904 €	799.363 €	913.644 €	2.047.668 €		10.297.235 €	207.407 €	166.872 €
2010	61.520 €	132.645 €		9.525 €		1.966 €	476.943 €	57.099 €	2.453.004 €	197.214 €	719.989 €	1.182.548 €	1.868.564 €		8.382.648 €	186.272 €	147.940 €
2009	55.802 €	188.440 €		0 €		56.538 €	484.965 €	12.571 €	2.252.270 €	159.045 €	761.083 €	679.143 €	1.252.473 €		8.313.657 €	225.797 €	152.581 €
2008	36.616 €	290.546 €				65.151 €	592.251 €	0 €	1.388.272 €	166.944 €	661.217 €		1.140.798 €		7.078.825 €	28.082 €	209.388 €
2007	56.785 €	193.765 €				93.029 €	483.016 €	0 €	700.834 €	145.150 €	546.660 €		719.662 €		5.593.377 €		235.191 €
2006	58.039 €	155.777 €				3.844 €	395.775 €		1.124.292 €	94.825 €	413.630 €		859.859 €		5.654.953 €		157.355 €
		124.515 €					248.670 €		666.558 €	44.501 €	353.163 €		671.584 €		4.395.919 €		79.965 €

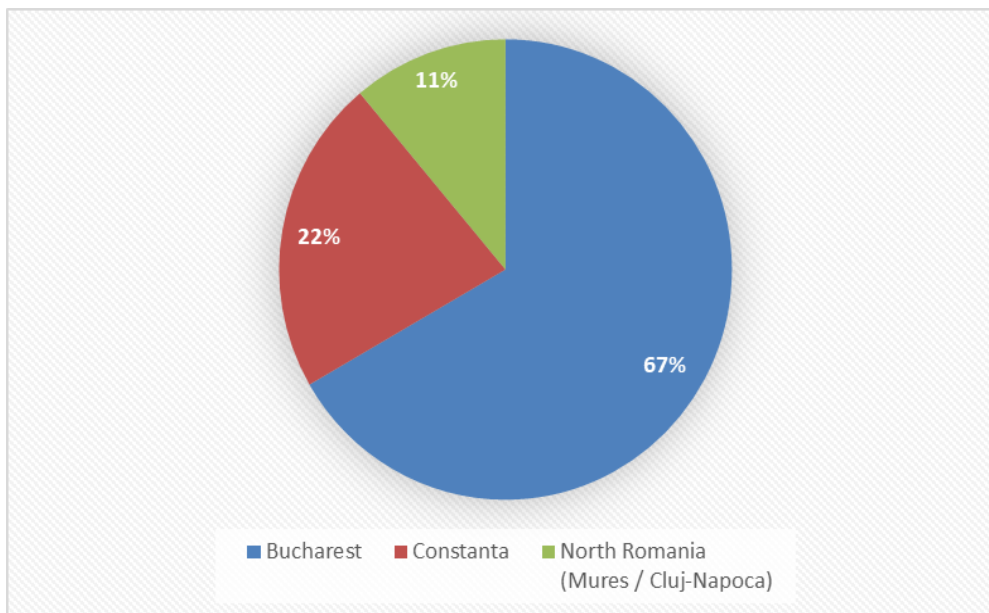
### Number of established private laboratories

Year	2000	2005	2010	2016
Number of established laboratories	5	9	14	17



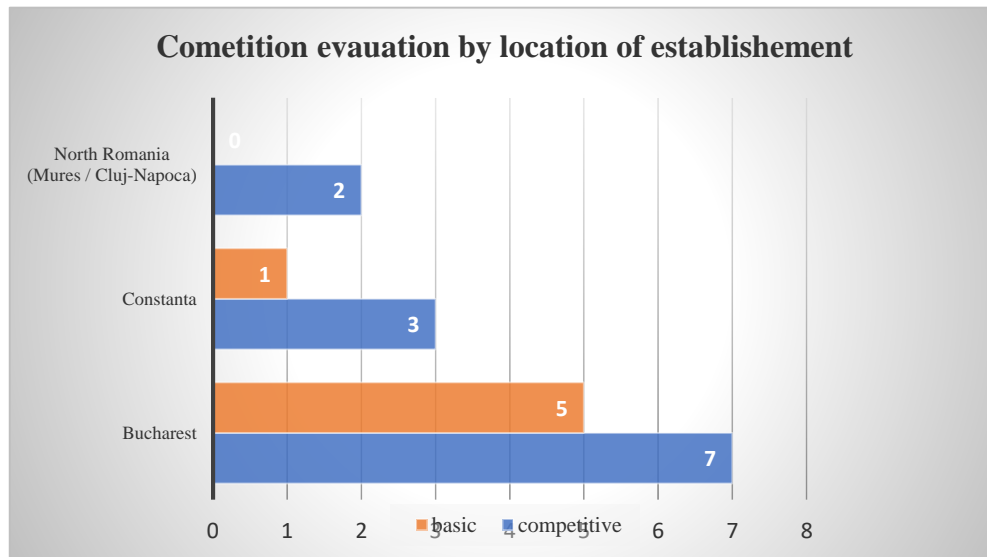
### Competitor's location of establishment

anticipated competition	Bucharest	Constanta	North Romania (Mures / Cluj-Napoca)	total
competitive	7	3	2	11
basic	5	1	0	6



## Competitor's evaluation by location of establishment

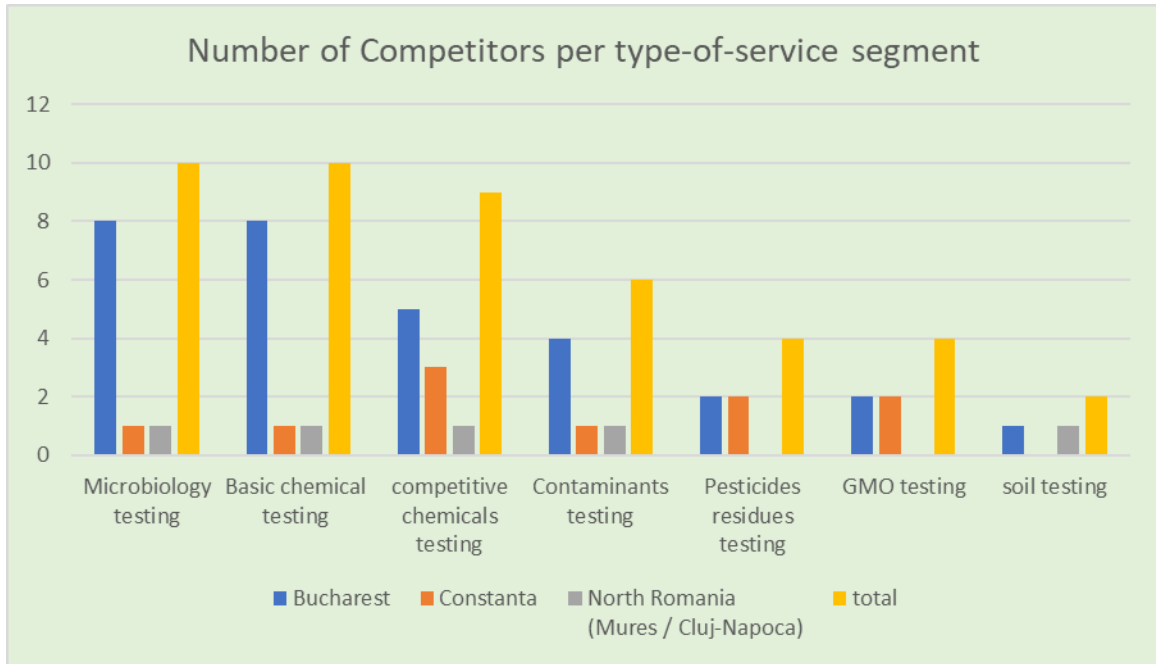
	competitive	basic
Bucharest	7	5
Constanta	3	1
North Romania (Mures / Cluj-Napoca)	2	0



## Competitors per Type-of-service segment

	Bucharest	Constanta	North Romania (Mures / Cluj-Napoca)	total
Microbiology testing	8	1	1	10
Basic chemical testing	8	1	1	10
competitive chemicals testing	5	3	1	9
Contaminants testing	4	1	1	6
Pesticides residues testing	2	2	0	4
GMO testing	2	2	0	4
soil testing	1	0	1	2





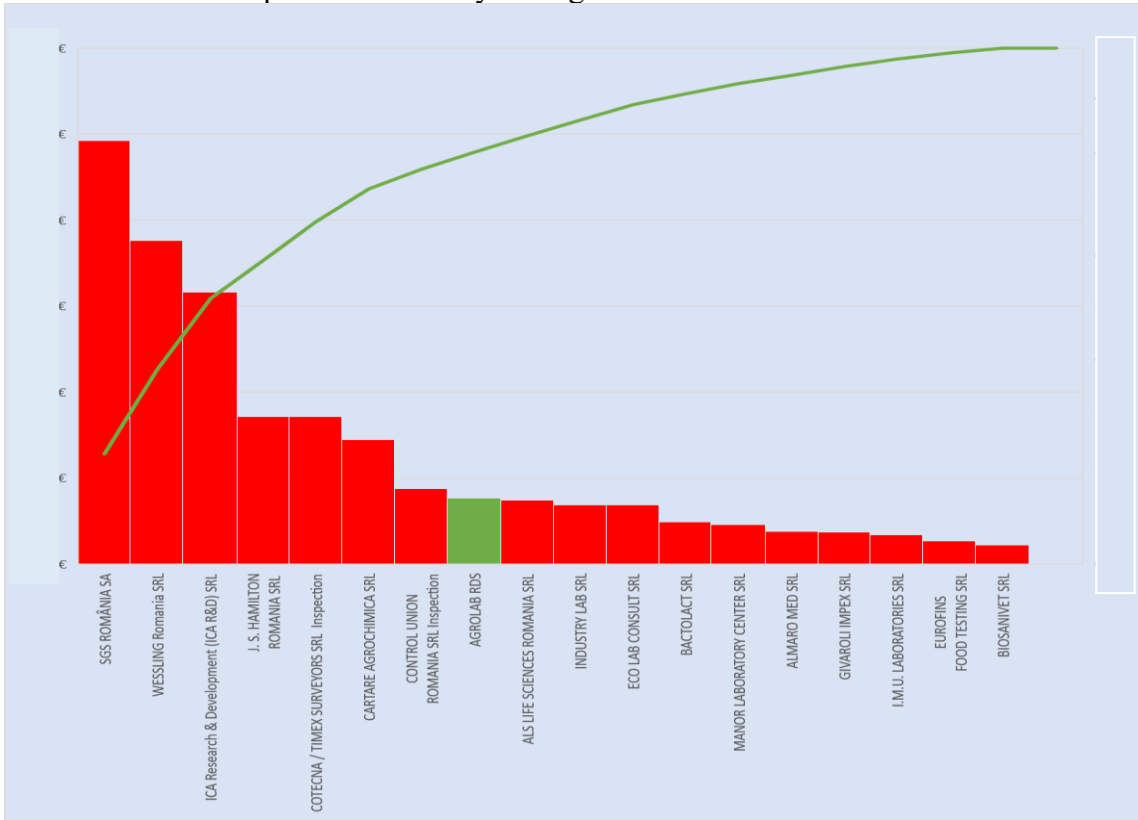
## Market Size Estimation

Company's Name	Location	Turnover , in K € (2018)	scope evaluation	estimation of Water-Food-Feed testing services contribution to company's turnover	Water-Food-Feed testing services estimated turnover in K€ (2018)
ALMARO MED SRL*	Bucharest	190 €	basic	100%	190 €
BACTOLACT SRL*	Bucharest	246 €	basic	100%	246 €
CARTARE AGROCHIMICA SRL*	Bucharest	725 €	competitive	100%	725 €
INDUSTRY LAB SRL*	Bucharest	345 €	basic	100%	345 €
J. S. HAMILTON * ROMANIA SRL	Bucharest Cluj-Napoca (North Romania)	859 €	competitive	100%	859 €
MANOR LABORATORY CENTER SRL*	Bucharest	228 €	basic	100%	228 €
WESSLING Romania SRL*	Mures	1.880 €	competitive	100%	1.880 €
BIOSANIVET SRL*	Constanta	112 €	basic	100%	112 €
ECO LAB CONSULT SRL*	Bucharest	342 €	competitive	100%	342 €
ICA Research & Development (ICA R&D) SRL*	Bucharest	1.580 €	competitive	100%	1.580 €
EUROFINS FOOD TESTING SRL*	Bucharest	136 €	-	100%	136 €
I.M.U. LABORATORIES SRL*	Bucharest	169 €	basic	100%	169 €
CONTROL UNION ** ROMANIA SRL Inspection	Constanta	4.390 €	competitive	20%	878 €
GIVAROLI IMPEX SRL**	Bucharest	622 €	competitive	30%	187 €
COTECNA / TIMEX SURVEYORS SRL Inspection**	Constanta	5.722 €	competitive	20%	1.144 €
ALS LIFE SCIENCES ROMANIA SRL**	Ploiești	928 €	competitive	60%	557 €
SGS ROMÂNIA SA**	Constanta Brazi	16.409 €	competitive	15%	2.461 €
	-		-		
<b>Total direct competitors turnover</b>		<b>34.883 €</b>			
<b>Turnover concerning Water-Food-Feed testing services (estimated)</b>					<b>12.421 €</b>

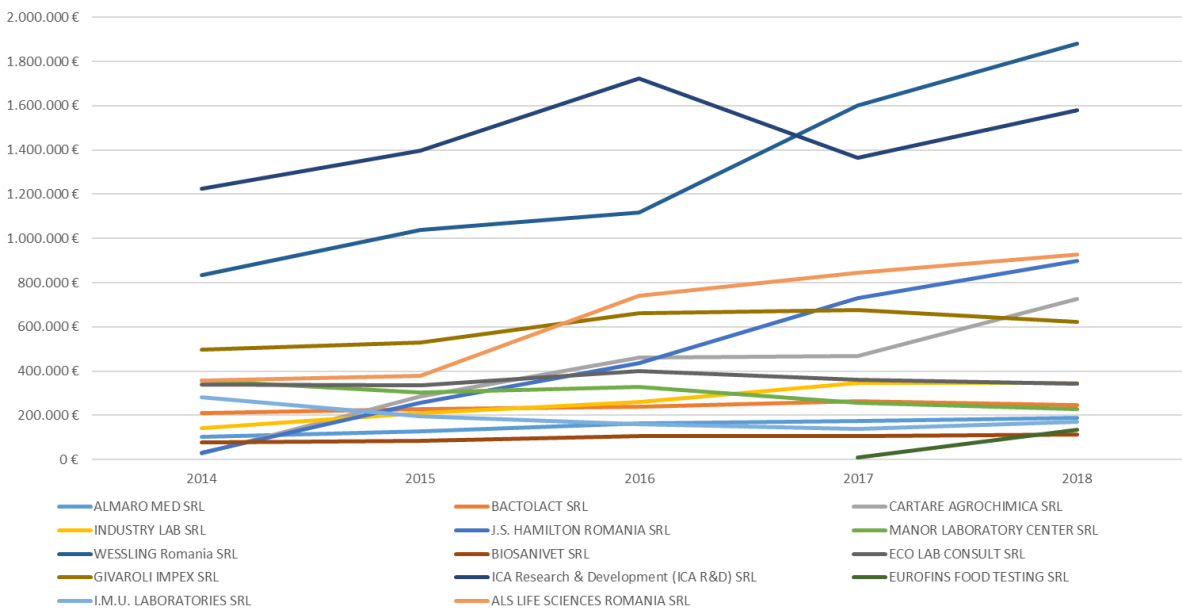
\* competition offering only Food, Feed & Soil testing services

\*\* competition additionally offering Inspection, Consulting & Non-Food analysis services

## Estimated Romania private laboratory testing market size in K €



## Development of potential domestic competition during the last 5 years



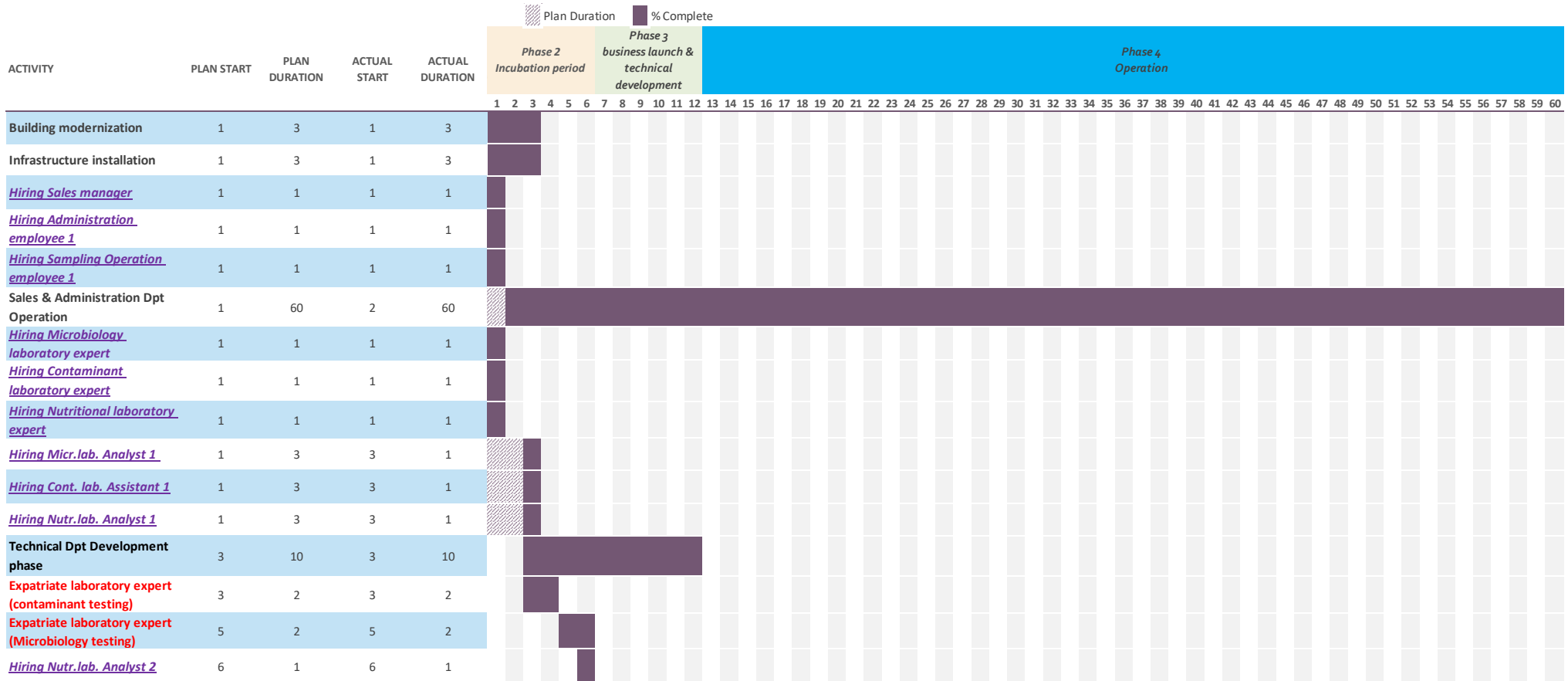
# **Appendix II**

## **Milestones**

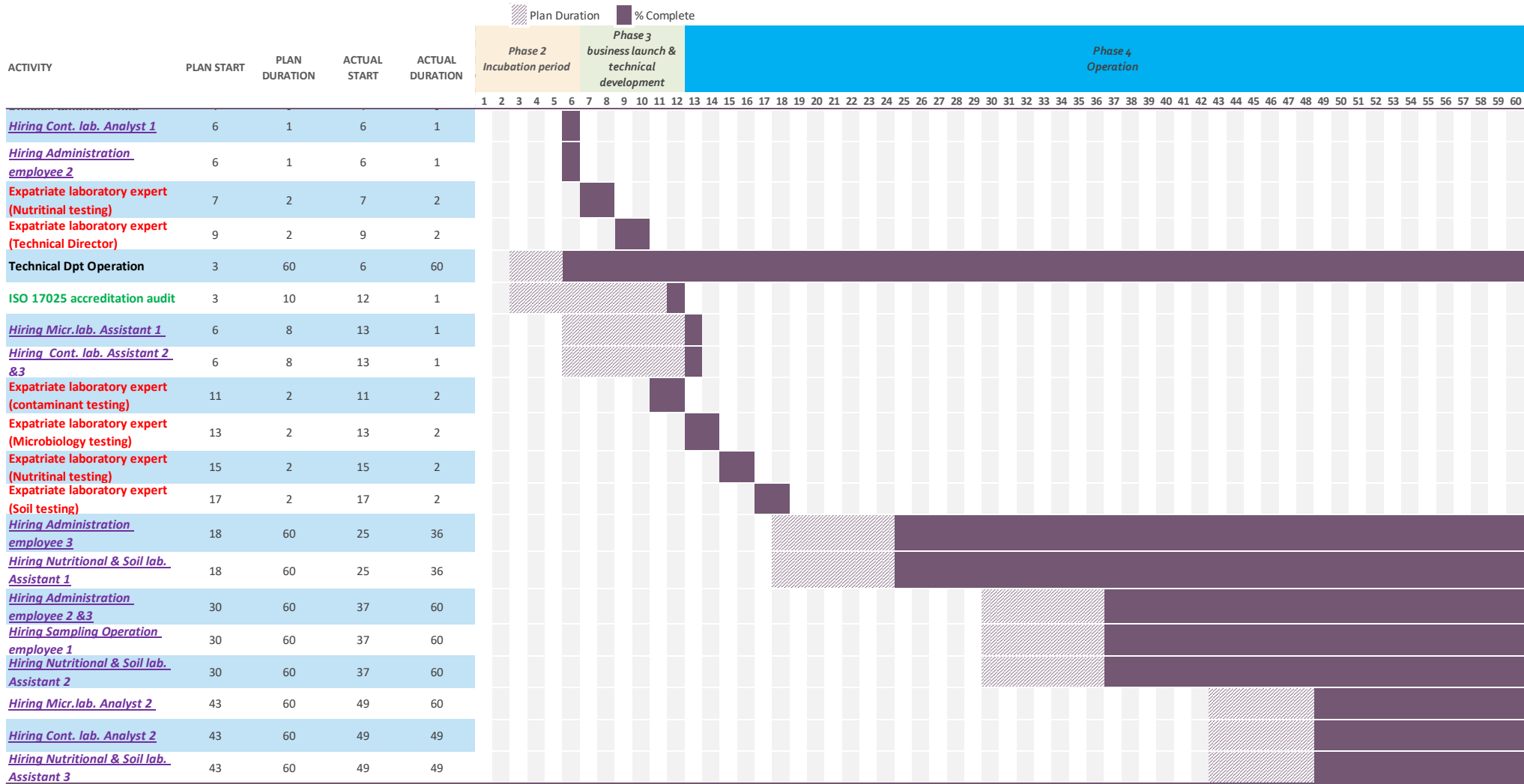


# Phase 2 - 4 Duration: 5-year project

## Phase 2 - 4



## Phase 2 - 4



# Appendix III

## Anticipated Expenses

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# 1 General Information

- Calculation of anticipated expenses is presented for a 5-year operation cycle.
- **Currency:** Romania's currency is Romanian leu (RON) with current EURO/RON exchange rate of 4.7728<sup>1</sup>. While the majority of investment's fixed costs are expected to occur in EURO, operating costs are expected to occur in RON. For reasons of simplicity in calculations, all mentioned costs are given in euros, while RON calculations will be available in the excel appendix, depending on the current applied exchange rate.

## 2 Project's anticipated expenses

### Start-Up/Investment costs

- Company's legal establishment cost.
- Rents in advance for selected building.
- Real estate commissions.
- Cost of building's modernization and improvement.
- IT systems requirements.
- Miscellaneous operational equipment.
- Acquisition and Installation for Analytical testing equipment, Information Management System & miscellaneous equipment.

### Operating Costs

- Cost of premises (including rent & building's insurance etc) & utilities costs (e.g. heating, water, sewer, electricity, telephone/internet).
- Miscellaneous supporting services (accounting and law services).
- Car leasing and Fuel costs.
- Marketing costs (Advertising and Promotion).
- Travel expenses (expatriate personnel, marketing activities etc).

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<sup>1</sup> <https://finance.yahoo.com/quote/euron=x/>

- Accreditation activities costs.
- Courier expenses.
- Staff costs: employee wages, expatriate’s wages, other benefits etc.
- Testing Services Laboratory Operating Costs (maintenance, consumables etc).
- Laboratory Information Management System (LIMS) , SAP & IT miscellaneous maintenance cost.

### 3 Start-Up costs

#### 3.1 Company’s Legal Establishment cost

The most common way to open a company in Romania is by registering a limited liability company (*societate cu raspundere limitata* – SRL). To do so, it is necessary to register it with the National Trade Register Office, an institution which operates under the Chamber of Commerce and Industry in Romania<sup>2</sup>. This body, the National Trade Register Office, is set up as a public institution that gathers data on all companies that are registered at a national level.

Minimum paid-in capital requirement for an SRL company is 200 RON<sup>3</sup>, while total company’s formation cost (including legal services) is not expected to exceed 500 €

➤ <b>Company’s Legal Establishment estimated cost :</b>	<b>1.500,00 €</b>	<i>(7.159 RON)</i>
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*(source: Enescu & Cuc - oriented towards foreign investors<sup>4</sup>)*

#### 3.2 Rents in advance + Real estate commissions for selected building

Two rents in advances are budgeted (see section) and an estimated commission as below :

➤ <b>Cost for rents in advance:</b>	<b>20.000,00 €</b>	<i>(95.456 RON)</i>
➤ <b>Cost for Real estate commissions:</b>	<b>2.000,00 €</b>	<i>(9.546 RON)</i>

<sup>2</sup> Commerce and Industry in Romania , <https://ccir.ro/en/>

<sup>3</sup> World bank Group <https://www.doingbusiness.org/content/dam/doingBusiness/country/r/romania/ROM.pdf>

### 3.3 Cost of Building's Modernization and Improvement

To cover ISO 17025 requirements as well as, based on company's past experience, total operating efficiency requirement, selected building will have to be re-modernized. This will include the following operations with the corresponding estimated cost

#### 3.3.1 Laboratory flooring operations

Laboratories should have chemically resistant covered flooring. floor tiles Rubberized materials or flooring with a small amount of grit may be used

➤ <b>Laboratory flooring operations estimated cost:</b>	<b>10.000,00 €</b>	<i>(47.728 RON)</i>
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*(source: Agrolab RDS)*

#### 3.3.2 laboratory furniture

includes all required laboratory chemical hoods and sinks, sturdy mobile carts, adjustable tables, and equipment racks. Cost of laboratory furniture is included section 3.5.

#### 3.3.3 Office furniture

Including, office tables, chairs etc

➤ <b>Office furniture estimated cost:</b>	<b>10.000,00 €</b>	<i>(47.728 RON)</i>
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*(source: Agrolab RDS)*

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<sup>4</sup> [https://www.romanianlawoffice.com/company\\_formation\\_romania.htm](https://www.romanianlawoffice.com/company_formation_romania.htm)

### 3.3.4 Various operations

General other modernization activities to cover requirements on fire protection systems, accessibility, safety showers, eyewash units, sinks, plumbing, ventilation, alarm systems, chemical storage restrictions, and egress issues.

➤ <b>Various other operations cost:</b>	<b>15.000,00 €</b>	<i>71.592 RON</i>
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*(source: Agrolab RDS)*

### 3.3.5 Air-condition installation

Critical to maintain indoor environment's temperature to the suitable required for the efficient operation of the analytical testing machinery (usually below 18°C)

➤ <b>Ai-condition installation:</b>	<b>20.000,00 €</b>	<i>95.456 RON</i>
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*(source: Agrolab RDS)*

## 3.4 IT Systems Requirements

### 3.4.1 LIMS

LIMS' license will be acquired from AGROLAB RDS. As it is internally developed, based on AGROLAB RDS's requirements and needs, it will be 100% applicable and ready-to-use for the Romanian project. Cost of license acquisition will also include initial installation and long-term support services form AGROLAB RDS's IT department.

➤ <b>LIMS estimated cost:</b>	<b>15.000,00 €</b>	<i>71.952 RON</i>
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### 3.4.2 SAP

Two SAP licenses will be required for monitoring and registering operational and financial performance and invoicing procedures.

➤ <b>SAP licenses estimated cost:</b>	<b>7.000,00 €</b>	<i>33.410 RON</i>
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### 3.4.3 SERVER

A server will be required to support all LIMS and SAP activities

➤ <b>SERVER estimated cost:</b> <i>(e.g. DELL R740 x 2items)</i>	<b>7.000,00 €</b>	33.410 RON
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*(source: Agrolab RDS)*

### 3.4.4 Firewall

➤ <b>Firewall estimated cost:</b>	<b>1.000,00 €</b>	4.773 RON
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*(source: Agrolab RDS)*

### 3.4.5 Computers/printers

The following equipment will be required to support company's operations and services

- Table PCs (total 8 items) : 5 items for laboratory use & 3 items for administration use

➤ <b>Tabel PC estimated cost per unit:</b>	<b>720,00 €</b>	(3.436 RON)
➤ <b><u>Total cost</u> for 8 units</b>	<b>5.760,00 €</b>	(27.491 RON)

*(source: Agrolab RDS)*

- Laptops (4 items) : 1 item for General Management use, 1 item for Sales Area manager use & 2 items for laboratory supervisors use

➤ <b>Laptop estimated cost per unit:</b>	<b>820,00 €</b>	3.914 RON
➤ <b><u>Total cost</u> for 4 units</b>	<b>3.280,00 €</b>	15.655 RON

*(source: Agrolab RDS)*

- Printers (4 items) : 2 items for laboratory use & 2 items for administration use

➤ <b>Printer estimated cost per unit:</b>	<b>600,00 €</b>	2.864 RON
➤ <b><u>Total cost</u> for 4 units</b>	<b>2.400,00 €</b>	11.455 RON

*(source: Agrolab RDS)*

## 3.5 Laboratory Equipment Acquisition & Installation

### 3.5.1 Microbiology lab

Microbiology lab is expected to be introduced with the following equipment and other relevant costs

➤ <b>Laboratory furniture (estimated)</b>		<b>5.000 €</b>	23.864 RON
➤ <b>Vortex (3 items)</b> <i>e.g. SELECTA 7001721</i>		<b>750 €</b>	3.580 RON
➤ <b>Laminar air flow cabinet</b> <i>e.g. BIOAIR AURA 2000 MAC</i>		<b>10.000 €</b>	47.728 RON
➤ <b>Autoclave</b> <i>e.g. WITEG WAC-80</i>		<b>5.000 €</b>	23.864 RON
➤ <b>Filtration device</b> <i>e.g. SARTORIUS STEDIM 16482</i>		<b>3.000 €</b>	14.318 RON
➤ <b>Incubator (7items)</b> <i>e.g. SANYO/MIR 253</i>		<b>35.000 €</b>	167.048 RON
➤ <b>Digital Precision balance (3 items)</b> <i>e.g. BELL MARK330</i>		<b>1.800 €</b>	8.591 RON
➤ <b>Freezer (2 items)</b> <i>e.g. ZANUSSI ZFC41400WA</i>		<b>1.000 €</b>	4.773 RON
➤ <b>Stomacher blender</b> <i>e.g. INTERSCIENCE 400P</i>		<b>800 €</b>	3.818 RON
➤ <b>Magnetic stirrer (3 items)</b> <i>e.g. LLG LABWARE PT1000-A</i>		<b>1.200 €</b>	5.727 RON
➤ <b>Colony counter</b> <i>e.g. ISOLAB</i>		<b>600 €</b>	2.864 RON
➤ <b>Microscope</b> <i>e.g. Bel photonicsB2</i>		<b>800 €</b>	3.818 RON

➤ <b>pH meter</b> <i>e.g. mrc PHS-3E</i>	<b>400 €</b>	<i>1.909 RON</i>
➤ <b>Water bath (3 items)</b> <i>e.g. Wisd Laboratory Instruments WB-22</i>	<b>1.800 €</b>	<i>8.591 RON</i>
➤ <b>Refrigerator (3 items)</b> <i>e.g. HENO/Visicooler.D372SCM45L</i>	<b>1.500 €</b>	<i>7.159 RON</i>

(source: Agrolab RDS)

### 3.5.2 Contaminant lab

Contaminant laboratory is expected to be introduced with the following equipment and other relevant costs

➤ <b>Laboratory furniture (estimated)</b>	<b>5.000 €</b>	<i>23.864 RON</i>
➤ <b>LC-QTOF</b> <i>e.g. SCIEX X500R</i>	<b>300.000 €</b>	<i>1.431.840 RON</i>
➤ <b>GC-MS/MS</b> <i>e.g. Bruker EVOQ</i>	<b>125.000 €</b>	<i>596.600 RON</i>
➤ <b>GC-FPD</b> <i>e.g. Agilent GC 6890</i>	<b>25.000 €</b>	<i>119.320 RON</i>
➤ <b>LC-MS/MS</b> <i>e.g. Thermo Quantiva</i>	<b>220.000 €</b>	<i>1.050.016 RON</i>
➤ <b>Centrifugal</b> <i>e.g. Eppendorf 600</i>	<b>5.000 €</b>	<i>23.864 RON</i>
➤ <b>Condenser</b> <i>e.g. Thermo D9000</i>	<b>5.000 €</b>	<i>23.864 RON</i>
➤ <b>Fume hood</b>	<b>5.000 €</b>	<i>23.864 RON</i>



➤ <b>Digital Precision balance (2 items)</b> <i>e.g. Kern A120</i>	<b>2.000 €</b>	9.546 RON
➤ <b>Freezer (2 items)</b>	<b>1.000 €</b>	4.773 RON
➤ <b>miscellaneous other analytical equipment</b>	<b>5.000 €</b>	23.864 RON
➤ <b>Refrigerator (3 items)</b>	<b>1.500 €</b>	7.159 RON
➤ <b>analytical standards</b>	<b>70.000 €</b>	334.096 RON

### 3.5.3 Nutritional analysis lab & Soil analysis lab ab

Nutritional analysis & Soil testing lab is expected to be introduced with the following costs.

➤ <b>Laboratory furniture (estimated)</b>	<b>5.000 €</b>	23.864 RON
➤ <b>ICP-MS</b> <i>e.g. Agilent 7800</i>	<b>110.000 €</b>	525.008 RON
➤ <b>Analytical scale (3 items)</b> <i>e.g. Ohaus AX224</i>	<b>3.000 €</b>	14.318 RON
➤ <b>Knife Mill (x2)</b> <i>e.g. Fritsch-Pulverisette 11</i>	<b>4.000 €</b>	19.091 RON
➤ <b>Muffle furnace</b> <i>e.g. Nabertherm-LE 14/11</i>	<b>5.000 €</b>	23.864 RON
➤ <b>Fume hood</b> <i>e.g. SB-Max</i>	<b>5.000 €</b>	23.864 RON
➤ <b>Drying Oven for moisture measurement</b> <i>e.g. Memmert-UF55</i>	<b>2.000 €</b>	9.546 RON

➤ <b>Block Digestion Unit for Kjeldahl analysis</b> <i>e.g. C.Gerhardt-Kjeldatherm KT</i>	<b>6.000 €</b>	28.637 RON
➤ <b>Steam Distillation Unit</b> <i>e.g. C.Gerhardt-Vapodest 450</i>	<b>10.000 €</b>	47.728 RON
➤ <b>Soxhlet - Fat Extraction Unit</b> <i>e.g. C.Gerhardt-Soxtherm</i>	<b>6.000 €</b>	28.637 RON
➤ <b>Fiber Determination Unit</b> <i>e.g. C.Gerhardt-Fibretherm</i>	<b>10.000 €</b>	47.728 RON
➤ <b>Microwave Digestion System</b> <i>e.g. Milestone- Ethos Up</i>	<b>10.000 €</b>	47.728 RON
➤ <b>Rotary Evaporator</b> <i>e.g. Heidolph-HeiVAP Ultimate</i>	<b>2.000 €</b>	9.546 RON
➤ <b>Double Beam Spectrophotometer</b> <i>e.g. Hitachi-UH5300</i>	<b>8.000 €</b>	38.182 RON
➤ <b>miscellaneous equipment:</b> <i>pH meters, stirrers, shakers, milliQ, vortex, volumetric, pippettes e.t.c.</i>	<b>5.000 €</b>	23.864 RON
➤ <b>Labware</b>	<b>10.000 €</b>	47.728 RON
➤ <b>Laboratory Furniture</b>	<b>2.000 €</b>	9.546 RON
➤ <b>Drying Oven (x2)</b>	<b>5.000 €</b>	23.864 RON
➤ <b>Greeding unit</b>	<b>10.000 €</b>	47.728 RON
➤ <b>Analytical scale (4 items)</b>	<b>2.000 €</b>	9.546 RON
➤ <b>Bernard calcimeter</b>	<b>1.500 €</b>	7.159 RON
➤ <b>Ph meter, EC meter</b>	<b>1.000 €</b>	4.773 RON

(source: Agrolab RDS)

## 4 Operating Costs

Operating costs include the yearly cost of day-to day business operation, including cost of goods sold, operating expenses and overhead expenses.

### 4.1 Cost of Premises

A suitable Industrial building space should be searched out, in the area of Bucharest. Building should be suitable to house all business operations and to be able to support all required modernization activities (according GLP and ISO 17025 requirements) as well as all, required by Romanian legislation, operation licenses and approvals.

To be able to facilitate all required business operations, candidate building should be not less than 1.000 m2 with an optimum of 1.500 m2.

With an expected cost between 5,00 € -8,00 € per m2, per month for industrial spaces and between 7,00 € -10,00 € per m2, per month for business office buildings<sup>5</sup>, estimated premises cost is:

➤ <b>Premises estimated cost per month</b>	<b>10.000,00 €</b>	<i>47.728 RON</i>
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### 4.2 Utilities Cost

Electricity, Water/Sewer, Natural Gas, Garbage services are estimated as

➤ <b>Utilities estimated cost per month</b>	<b>4.000,00 €</b>	<i>19.091 RON</i>
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<sup>5</sup> <https://www.proprietati-industriale.ro/component/osproperty/compara-propietati> ,  
<https://www.romania-insider.com/office-space-rent-cost-bucharest> ,  
<https://www.regatta.ro/en/industrial-spaces-rent/> , <https://www.officerentinfo.ro/>

### 4.3 Testing services operating costs

Testing services operating costs are Variable costs to ensure efficient operation of company's technical department. Based on anticipated sales forecast, these costs can be distinguished to

#### 4.3.1 Cost for subcontracted laboratory testing services

During its development company will have high needs in subcontracting a big percentage of its total volume to parent company (AGROLAB RDS-Greece). This cost will be gradually reduced (as company's development progresses and new domestically provided services are introduced) to a certain level, representing only offered services that are not internally executed.

Current AGROLAB RDS' commercial policy implements an average discount on its basic price list of ■% toward customers (average prices per type of service) and ■% discount towards other group companies within its organization (subcontracting activities). Based on this internal policy the subcontracting cost of any testing service is not expected to exceed the ■% of the achieved selling price, in other words the ■% of the achieved turnover for the subcontracted services.

#### 4.3.2 Cost for Microbiology lab operations

Microbiological testing laboratory operation includes the following costs

- **Labor cost** (presented in section 4.5)
- **Equipment maintenance cost**

Since acquired testing equipment is anticipated to come with a 2-year guarantee, maintenance costs are expected to be low during the first 2-year (estimated at 500 €) and gradually increase up to the amount of 3.000 € at the 5<sup>th</sup> year of operations

➤ <b>Microbiological lab equipment cost (year 1)</b>	<b>500,00 €</b>	<i>2.386 RON</i>
➤ <b>Microbiological lab equipment cost (year 2)</b>	<b>500,00 €</b>	<i>2.386 RON</i>
➤ <b>Microbiological lab equipment cost (year 3)</b>	<b>1.500,00 €</b>	<i>7.159 RON</i>
➤ <b>Microbiological lab equipment cost (year 4)</b>	<b>3.000,00 €</b>	<i>14.318 RON</i>
➤ <b>Microbiological lab equipment cost (year 5)</b>	<b>3.000,00 €</b>	<i>14.318 RON</i>

- **Testing consumables.** Testing consumables for the mentioned average selling price (■ €/per sample) is estimated at ■ €/ per tested sample

### 4.3.3 Cost for Contaminant lab operations

Contaminant testing laboratory operation includes the following costs

- **Labor cost** (presented in section 4.5)
- **Equipment maintenance cost**

Since acquired testing equipment is anticipated to come with a 2-year guarantee, maintenance costs are expected to be low during the first 2-year and gradually increase up after the second year of operations, as presented below:

➤ <b>Contaminant lab equipment cost (year 1)</b>		
LC-QTOF maintenance	1.000,00 €	4.773 RON
GC-MS/MS maintenance	1.000,00 €	4.773 RON
GC-FPD maintenance	500,00 €	2.386 RON
LC-MS/MS maintenance	1.000,00 €	4.773 RON
➤ <b>Contaminant lab equipment cost (year 2)</b>		
LC-QTOF maintenance	2.000,00 €	9.546 RON
GC-MS/MS maintenance	2.000,00 €	9.546 RON
GC-FPD maintenance	700,00 €	3.341 RON
LC-MS/MS maintenance	2.000,00 €	9.546 RON
➤ <b>Contaminant lab equipment cost (year 3)</b>		
LC-QTOF maintenance	10.000,00 €	47.728 RON
GC-MS/MS maintenance	8.000,00 €	38.892 RON
GC-FPD maintenance	1.500,00 €	7.159 RON
LC-MS/MS maintenance	8.000,00 €	38.892 RON
➤ <b>Contaminant lab equipment cost (year 4)</b>		
LC-QTOF maintenance	10.000,00 €	47.728 RON
GC-MS/MS maintenance	8.000,00 €	38.892 RON
GC-FPD maintenance	1.500,00 €	7.159 RON
LC-MS/MS maintenance	8.000,00 €	38.892 RON
➤ <b>Contaminant lab equipment cost (year 5)</b>		
LC-QTOF maintenance	12.000,00 €	57.274 RON
GC-MS/MS maintenance	12.000,00 €	57.274 RON
GC-FPD maintenance	3.000,00 €	14.318 RON
LC-MS/MS maintenance	12.000,00 €	57.274 RON

- **Testing consumables**

Testing consumables for the mentioned average selling prices are estimated as

- ■■■,00 €/per tested sample for Pesticide Residues (■■■ RON)
- ■■■,00 €/per tested sample for Mycotoxin (■■■ RON)

#### 4.3.4 Cost for nutritional lab and Soil lab operation

Contaminant testing laboratory operation includes the following costs

- **Labor cost** (presented in section 4.5)
- **Equipment maintenance cost**

Since acquired testing equipment (ICP-MS) is anticipated to come with a 2-year guarantee, maintenance costs are expected to be low during the first 2 year and gradually increase up after the second year of operations, as presented below:

➤ ICP-MS maintenance ( <b>year 1</b> )	<b>800,00 €</b>	3.818 RON
➤ ICP-MS maintenance ( <b>year 2</b> )	<b>2.000,00 €</b>	9.546 RON
➤ ICP-MS maintenance ( <b>year 3</b> )	<b>5.000,00 €</b>	23.864 RON
➤ ICP-MS maintenance ( <b>year 4</b> )	<b>5.000,00 €</b>	23.864 RON
➤ ICP-MS maintenance ( <b>year 5</b> )	<b>5.000,00 €</b>	23.864 RON

- **Testing consumables**

Testing consumables for the mentioned average selling prices are estimated as

- ■■■,00 €/per tested sample for Nutritional elements (■■■ RON)
- ■■■,00 €/per tested sample for Heavy metals or Food preservatives (■■■ RON)
- ■■■,00 €/per tested Soil sample (■■■ RON)

#### 4.4 Auto-lease expenses

Expense includes leasing cost of and fuel cost of for 3 types of company cars as presented below

User	Category Type.	Estimated monthly Cost of lease <sup>6</sup>	Estimated monthly Cost of Fuel *
Company car for General Manager	Medium superior	410 € (1.957 RON)	240 € (1.145 RON)
Company car for Sales Area Manager	Medium	360 € (1.718 RON)	240 € (1.145 RON)
Company car for Sampling services	Van	300 € (1.432 RON)	240 € (1.145 RON)

\*Estimation use of 40.000 km per year - average consumption of 6,0 liter/100 km

Average diesel cost of 1,2 € per litter<sup>7</sup>

#### 4.5 Staff Costs: employee wages, expatriate's wages , other benefits etc.

Minimum gross general salary in Romania (no degree / no experience), is 2.080 RON (436 €), while minimum salary for those who have completed college and have 1 year of experience in the field is around 2.350 RON (492 €)<sup>8</sup>. Concerning required personnel, indicative average gross monthly salary is formulated as presented below<sup>9</sup>:

- Finance manager: 9.750 RON (2.042 €)
- Chemist – lab supervisor: 3.700 RON (775 €)
- Chemical Lab Technician: 2.490 RON (521 €)
- Sales manager : 5.439 RON (1.140 €)
- Secretary administration 2.350 RON (492 €).

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<sup>6</sup> <https://auto.leaseplan.ro/>

<sup>7</sup> [https://www.globalpetrolprices.com/Romania/diesel\\_prices/](https://www.globalpetrolprices.com/Romania/diesel_prices/)

<sup>8</sup> <https://www.romaniaexperience.com/what-is-the-minimum-and-average-salary-in-romania-in-2017/>

<sup>9</sup> <https://www.paylab.ro/en/salaryinfo>

Taking into consideration the above data, proposed project will require the below minimum full-time staff positions and salary costs:

<b>Divisions</b>	<b>Selection criteria</b>	<b>Estimated Salary per employee, per month</b>
<b>• General Management</b>		
General Manager	Bachelor & Master's degree	3.0000 € (14.318 RON)
<b>• Sales division</b>		
Salesman	Bachelor degree (Agronomist or Food Science)	1.140 € (5.441 RON)
Sampling operation	Bachelor degree (Agronomist or Food Science)	492 € (2.348 RON)
<b>• Administration division</b>		
Secretary	Basic /preferable college degree (Agronomist or Food Science)	492 € (2.348 RON)
<b>• Technical division</b>		
Laboratory expert	Bachelor degree (Chemist, Biology or Food Science)	775 € (3.699 RON)
Laboratory Analyst	Bachelor degree (Chemist, Biology or Food Science)	521 € (2.487 RON)
Laboratory Assistant	Preferably Bachelor degree (Chemist, Biology or Food Science)	492 € (2.348 RON)

proposed wage values are just above-mentioned average Romanian cost, because of

- Inelastic ability in English speaking requirement for all positions
- Current extremely low unemployment level (3,8%<sup>10</sup> in total country and probably even lowest for the Bucharest area)

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<sup>10</sup> Romanian National Institute of statistics [http://www.insse.ro/cms/sites/default/files/com\\_presa/com\\_pdf/somaj\\_tr2e\\_19.pdf](http://www.insse.ro/cms/sites/default/files/com_presa/com_pdf/somaj_tr2e_19.pdf)



## 4.6 Courier cost

Courier cost can be distinguished between

### 4.6.1 Courier expenses for subcontracted services (sending abroad)

These costs refer to the dispatching client's samples to be laboratory tested by a collaborator abroad (in most of the times AGROLAB RDS-Greece). The cost to be undertaken is directly connected to the number of samples dispatched, estimating an average amount of ~0,5 kg per dispatching sample with an average cost (source ECCONT courier<sup>11</sup>) of ~3,3 €/Kg .

➤ Subcontracting services' monthly courier cost	<b>1,66 € per sample</b>	<i>8 RON per sample</i>
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### 4.6.2 Other Courier needs

All other courier needs are estimated with a monthly cost of

➤ Other Courier costs for Year 1 of operations	<b>300,00 €</b>	1.432 RON
➤ Other Courier costs for Year 2 of operations	<b>400,00 €</b>	1.909 RON
➤ Other Courier costs for Year 3 of operations	<b>550,00 €</b>	23.864 RON
➤ Other Courier costs for Year 4 of operations	<b>700,00 €</b>	3.341 RON
➤ Other Courier costs for Year 5 of operations	<b>800,00 €</b>	3.818 RON

## 4.7 Advertising & Promotion (marketing expenses)

These costs include advertising in local magazines as well exhibition participation in exhibitions and trade fairs in Romania

➤ Marketing expenses per month	<b>250 €</b>	<i>1.193 RON</i>
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<sup>11</sup> <https://www.econt.com/en/services/shipment-price>

#### 4.8 Legal and professional costs(including insurance, ISO 17025 audit)

Costs include externally supported Law services, and accounting services, as well as the cost of yearly ISO17025 audit form RENAR accreditation body.

➤ Annual cost for Law services through external collaborator	<b>4.000 €</b>	19.091 RON
➤ Annual cost for Accounting services through external collaborator	<b>4.000 €</b>	19.091 RON
➤ Annual cost for ISO 17025 audit	<b>6.000 €</b>	28.637 RON

#### 4.9 IT Systems maintenance

Including basically SAP lease renewal and other IT expenses

➤ Annual cost for SAP lease renewal	<b>1.500 €</b>	7.159 RON
➤ Annual cost for IT support	<b>1.500 €</b>	7.159 RON

#### 4.10 Other expenses

Since proposed business model includes expatriation activity from employees of AGROLAB RDS, the following cost of salaries, air tickets and accommodation are to be included also in companies' operational expenses

➤ Annual cost of expatriate package for General Manager	<b>4.800 €</b>	22.909 RON
➤ Annual air ticket budget for General Manager	<b>2.400 €</b>	11.455 RON
➤ Annual salary cost for expatriate technicians	<b>28.000 €</b>	133.638 RON
➤ Annual cost of expatriate package for expatriate technicians	<b>3.600 €</b>	17.182 RON
➤ Annual air ticket budget for expatriate technicians	<b>2.400 €</b>	11.455 RON

# Appendix IV

## List of laboratory testing services

(Source: Agrolab RDS)

Average offered prices per sample per testing service .....	- 2 -
Microbiological testing .....	- 3 -
Pesticide Residue testing .....	- 4 -
Mycotoxin testing .....	- 4 -
Nutritional analysis testing .....	- 5 -
Heavy metals, Food preservatives .....	- 5 -
Soil testing .....	- 6 -
GMO testing .....	- 6 -
Sensory testing.....	- 7 -
Plant Protection Products & Fertilizers testing.....	- 7 -
Fats & Oils testing .....	- 8 -
Organic & Inorganic Contaminants testing .....	- 9 -

## Average offered prices per sample per testing service

Type of laboratory testing service	average price per sample
Microbiological testing	██████ €
Pesticide Residue testing	██████ €
Mycotoxin testing	██████ €
Nutritional analysis testing	██████ €
Heavy metals, Food preservatives	██████ €
Soil testing	██████ €
GMO testing	██████ €
Sensory testing	██████ €
Plant Protection Products & Fertilizers testing	██████ €
Fats & Oils testing	██████ €
Organic & Inorganic Contaminants testing	██████ €

## Microbiological testing

TVC (food)	<i>Vibrio parahaemolyticus</i>	Enterococcus
<i>Psychrotrophs</i>	<i>Staphylococcal enterotoxin</i>	<i>Lipolytic bacteria 25oC</i>
<i>Enterobacteriaceae</i>	<i>Sterility Test</i>	<i>Lipolytic bacteria 30oC</i>
<i>Coliforms</i>	<i>Shelf life test</i>	<i>Paracites</i>
<i>Escherichia coli</i>	<i>Listeria spp count</i>	<i>Feacal coliforms</i>
<i>Staphylococcus aureus</i>	<i>B.thermosphacta</i>	<i>Alicyclobacilli IFU method (enumeration)</i>
<i>Bacillus cereus</i>	<i>Yersinia enterocolitica</i>	<i>Aerobic sporeformers (Bacilli)@55°C</i>
<i>Clostridium Perfringens</i>	<i>Shigella spp</i>	<i>Anaerobic sporeformers@55°C</i>
<i>Anaerobic sulfite reducing clostridia</i>	<i>Colonies identification</i>	<i>Anaerobic sulfite reducing bacteria (spores)</i>
<i>Yeasts (food)</i>	<i>Thermo tolerance anaerobic sulfite reducing clostridia</i>	<i>Anaerobic sulfite reducing bacteria@55°C</i>
<i>Molds (food)</i>	<i>Anaerobic sulfite reducing bacteria</i>	<i>Anaerobic sulfite reducing bacteria (spores)@55°C</i>
<i>Yeasts/Molds</i>	<i>Anaerobic bacteria</i>	<i>Anaerobic sulfite reducing clostridia (spores)</i>
<i>Osmophilic yeasts</i>	<i>Salmonella spp (VIDAS)</i>	<i>Anaerobic sulfite reducing clostridia (spores)@55°C</i>
<i>Aerobic sporeformers (Bacilli)</i>	<i>Salmonella spp/chicken waste</i>	<i>Aerobic detection @ 55°C / FDA</i>
<i>Anaerobic sporeformers</i>	<i>Serum Salmonella Typhimurium &amp; Enteritidis</i>	<i>Anaerobic detection @35°C / FDA</i>
<i>Lactobacilli</i>	<i>Listeria monocytogenes (count)</i>	<i>Anaerobic detection @55°C / FDA</i>
<i>Pseudomonas spp</i>	<i>Listeria monocytogenes (detection) (VIDAS)</i>	<i>Yeasts (milk &amp; milk products)</i>
<i>Salmonella spp</i>	<i>Listeria spp (det) (VIDAS)</i>	<i>Molds (milk &amp; milk products)</i>
<i>L.monocytogenes (detection)</i>	<i>Vibrio cholerae</i>	<i>Aerobic detection @ 35°C / FDA</i>
<i>Escherichia coli O157:H7</i>	<i>Επίπαγος</i>	<i>TVC (food) @ 55°C</i>
<i>Campylobacter spp (Detection)</i>	<i>Salmonella spp (ISO)</i>	<i>Anaerobic bacteria@ 55°C</i>
<i>Vibrio spp</i>	<i>Detection Alicyclobacilli</i>	<i>Campylobacter spp (enumeration) cfu/gr</i>

## Pesticide Residue testing

Dithiocarbamates pesticides	(P058b) UPLC-MS-MS & GC-MS-MS (>700 ingredients)	Compined QuPpe: Ethylenethiourea (ETU)
(P052) QTOF - GC-MS/MS & Dithiocarbamates (>500 ingredients).	DDAC, BAC-C12, BAC-C14, BAC-C18 etc	Compined QuPpe: Propylenethiourea (PTU)
(P052b) QTOF - GC-MS/MS (>500 ingredients)	Gibberellic acid	Compined : Dithianon
(P051) UPLC-MS-MS & GC-MS-MS & Dithiocarbamates (>560 ingredients)	Compined Hydrolysis: 1 active	Compined QuPpe: Ethephon
(P051b) UPLC-MS-MS & GC-MS-MS (>500 ingredients)	Various pesticides residues analysis in agricultural products	Compined : Fenbutatin oxide
(P053) QTOF R1 (~390 ingredients)	Matrine Quantification	Compined QuPpe: Inorganic total Bromide
(P055) GC-MS-MS R1 (~200 ingredients)	Quarternary Ammonium Coumpounds 2	Compined QuPpe: Maleic Hydrazide
(P059) QTOF & GC-MS-MS & Dithiocarbamates (>700 ingredients)	Single Active Igrredient	Fosetyl/Phosphonic acid + Chlorate/Perchlorate
(P059b) QTOF & GC-MS-MS (>700 ingredients)	Compined QuPpe: Fosetyl-Al and Phosphonic acid	
(P058) UPLC-MS-MS & GC-MS-MS & Dithiocarbamates (>700 ingredients)	Compined QuPpe: Perchlorate, Chlorate	

## Mycotoxin testing

Total Aflatoxins (B1, B2, G1, G2).	Deoxynivalenol (DON)	Fumonisins B1 & B2 toxins
Aflatoxin M1	Diacetoxyscirpenol (DAS)	Patuline toxin
Ochratoxin A	T-2	
Zearalenone (ZON)	HT-2	

## Nutritional analysis testing

Moisture	Starch	Total sugars
Ash	Reduced sugars	moisture, ash, dietary fibers, proteins, fats, carbohydrates, energy (Kcal, Kj)
pH	Total sugars	incl. peroxide, acidity & kreiss reaction in food (included the extraction of fats)
Protein	Determination of hydroxyproline (colagene)	incl. NDF, ADF, ADL
Crude fibers	Fructose, Glucose, Sucrose, Maltose, Lactose	Ash insoluble in HCl
Fats	moisture, ash, crude fibers, proteins, fats, carbohydrates, energy (Kcal, Kj)	

## Heavy metals, Food preservatives

iron (Fe), cooper (Cu), zinc (Zn), manganese (Mn), calcium (Ca), magnesium (Mg), sodium (Na), potassium (K) etc (single)	Selenium (Se), Antimony (Sb) (sinlge)	Nitrates & Nitrites salts
iron (Fe), cooper (Cu), zinc (Zn), manganese (Mn), calcium (Ca), magnesium (Mg), sodium (Na), potassium (K) (8 in total )	lead (Pb), cadmium (Cd), chromium (Cr), nickel (Ni), cobalt (Co), arsenic (As), mercury (Hg) (7 in total)	Calcium (Ca)
Calcium (Ca) , Iron (Fe), Potassium (K) (3 in total)	lead (Pb), cadmium (Cd), arsenic (As), mercury (Hg) (4 in total)	Lead (Pb) & Candmiun (Cd)
lead (Pb), cadmium (Cd), chromium (Cr), nickel (Ni), cobalt (Co), arsenic (As) (single) with GFAAS	Cr <sup>+6</sup>	Benzoic acid & Sorbic acid (2 in total)
mercury (Hg)	Nitrites salts	Benzoic acid or Sorbic acid
tin (Sn), silver (Ag), aluminium (Al) (single)	Nitrates salts	Propionic acid

## Soil testing

<p>mechanical structure, pH, total CaCO<sub>3</sub>, organic matter, specific electrical conductivity, magnesium (Mg), nitrate nitrogen (NO<sub>3</sub>-N), phosphor (P), potassium (K), copper (Cu), zinc (Zn), manganese (Mn), iron (Fe), boron (B). Comments &amp; fertilization consulting (14)</p>	<p>mechanical structure, pH, organic matter, total CaCO<sub>3</sub>, total nitrogen with Kjeldal, nitrate nitrogen (NO<sub>3</sub>-N), phosphor (P), potassium (K), magnesium (Mg), zinc (Zn), iron (Fe), manganese (Mn), copper (Cu), boron (B). Comments &amp; fertilization consulting (15)</p>	<p>incl. lead (Pb), cadmium (Cd), chromium (Cr), nickel (Ni), mercury (Hg), cooper (Cu), zinc (Zn) (7 in total)</p>
<p>mechanical structure, pH, organic matter, total CaCO<sub>3</sub>, active CaCO<sub>3</sub>. Comments &amp; fertilization consulting (5)</p>	<p>mechanical structure. CEC, pH, total CaCO<sub>3</sub>, organic matter, specific electrical conductivity, magnesium (Mg), nitrate nitrogen (NO<sub>3</sub>-N), phosphor (P), potassium (K), copper (Cu), zinc (Zn), manganese (Mn), iron (Fe), boron (B). Comments &amp; fertilization consulting (15)</p>	<p>pH, specific electrical conductivity, organic matter, nitrogen (N), phosphor (P), potassium (K), copper (Cu), zinc (Zn), manganese (Mn), iron (Fe), boron (B), nitrate nitrogen (NO<sub>3</sub>-N), sodium (Na), total CaCO<sub>3</sub>, C/N (15)</p>

## GMO testing

35S / NOS	CV127 / MON87701 / MON87708 / MON87769	35S / NOS + CV127 / MON87701 / MON87708 / MON87769
35S / NOS / SAMS / EPSPS	35S / NOS / SAMS / EPSPS / PAT	35S / NOS / SAMS / EPSPS / CV127 / MON87701 / MON87708 / MON87769



## Sensory testing

Sensory: Profile for 1 parameter	Sensory: Pair test	Sensory: Quantitative descriptive analysis + Product target analysis
Sensory: Profile for all parameters	Sensory: Ranking test	Sensory: Self life test
Sensory: Triangle test	Sensory: Quantitative descriptive analysis	

## Plant Protection Products & Fertilizers testing

Content determination of active substance in formulated products	Content determination of product active substance in the cleaning material	Lead (Pb), Cadmium (Cd), Chromium (Cr), Nickel (Ni), Cobalt (Co), Arsenic (As), Molybdenum (Mo) (single)
Physicochemical properties in formulated products (liquids)	Total Nitrogen (N), Water soluble Phosphorus (P <sub>2</sub> O <sub>5</sub> ), Water soluble Potassium (K <sub>2</sub> O)	Cl <sup>-</sup>
Physicochemical properties in formulated products (solids)	Total Nitrogen (N), Water soluble Phosphorus (P <sub>2</sub> O <sub>5</sub> ), Water soluble Potassium (K <sub>2</sub> O), Total Magnesium (MgO), Total Calcium (CaO), Total Zinc (Zn), pH, Conductivity	Total Magnesium (MgO), Total Calcium (CaO), Total Zinc (Zn),

## Fats & Oils testing

Metals & Heavy Metals package in oils	Moisture in Oils (method Karl Fischer)	Refractive index
Mercury determination in oils	Moisture & Volatiles 105 °C	Soap in Oils
Phosphorus content determination in oils	Foreign matter unsoluble in petroleum ether / hexane	Iodine value
Polenske number	Halogenated volatile solvents	Saponification value
Αριθμός Reichert	2-Monopalmitine	p-Anisidine value
Melting point	ΔECN42 (ECN42 practical – ECN42 theoretic)	Color - Lovibond method
Mineral oils in Oils	Determination of Foreign Oils (Global method)	Hexane residues in oils
Smoke point	Waxes content	Oil content & Moisture in Olive pomace/kernel
Sapons in Oils	Ethyl-Esters content	Oil content & Moisture in Olives
BTEX in edible oils	Sterols profile - Erythrodiol - Uvaol in oils	Oil content in Decanter waste water
Polycyclic aromatic hydrocarbons (PAHs) in oil	Aliphatic alcohols	Oxidation Stability - Rancimat method
Metals in oils	Sterols & Aliphatic alcohols	Polymerized Triglycerides in deepfrying oils
Metals & Heavy Metals package in oils	3,5-Stigmastadiene content	Total Polar compounds in deepfrying oils
Mercury determination in oils	1,2-Diglycerides (DAG's) (%)	Plasticizers Determination in Oils with GC (11)
Phosphorus content determination in oils	Pyropheophytin (PPP) (%)	Determination of Mineral Oil Hydrocarbons (MOH) (C10 – C60) (1)
Fatty acids profile in oils	α-Tocopherol content	Determination of triglycerides composition according ECN42
Acidity in oils (%)	Total Phenols (Folin method)	Determination of ester content in biofuels
Peroxides in oils	Unsaponifiable	Determination of glycerol (total and free), mono-, di- and triglyceride content in biofuels
Index K270, K232, ΔK	Density 20 °C	Determination of residual methanol content in biofuels (1)

## Organic & Inorganic Contaminants testing

Antibiotics: beta-Lactams	Veterinary Drugs Screening	Dioxins & Dioxins like PCBs + indicators in food
Antibiotics: chloramphenicol	Sesame, Egg (single)	Benzo(a)pyrene in food
Antibiotics: Nitrofurans	Lupin, Mustard (single)	Illegal Dyes (small package)
Antibiotics: quinolone	Celery (single)	Inorganic Arsenic (As)
Antibiotics: sulfonamide	Determination, identification & quantification of enterovirus 1	MOSH, POSH, MOAH
Antibiotics: Tetracycline	Glutene/Gliadin determination in food	3-MCPD ester, 2-MCPD ester, Glycidol + FAT content
Antibiotics: peniciline	Cazein Food Allergen	3-MCPD + FAT content
Antibiotics: NSAID	Horse DNA detection in food & feed	Pyrrolizidinalkaloides
Antibiotics: Ampenicols	CHICKEN DNA detection in food & feed	Tetrachloromethane (CCl4)
Antibiotics: Streptomycine	Polycyclic aromatic hydrocarbons (PAHs) in food	

# Appendix V

## Sales Forecast and Revenue data

Optimistic scenario, Risk-free Sales forecast .....	- 2 -
Optimistic scenario, delay Risk for ISO 17025 accreditation Sales forecast .....	- 2 -
Base scenario, Risk-free Sales forecast .....	- 3 -
Base scenario, delay Risk for ISO 17025 accreditation Sales forecast.....	- 3 -
Pessimistic scenario, Risk-free Sales forecast .....	- 4 -
Pessimistic scenario, delay Risk for ISO 17025 accreditation Sales forecast .....	- 4 -
Optimistic scenario, Risk-free - Performance.....	- 5 -
Optimistic scenario, delay Risk for ISO 17025 accreditation - Performance.....	- 6 -
Base scenario, Risk-free - Performance.....	- 7 -
Base scenario, delay Risk for ISO 17025 accreditation - Performance .....	- 8 -
Pessimistic scenario, Risk-free - Performance.....	- 9 -
Pessimistic scenario, delay Risk for ISO 17025 accreditation - Performance.....	- 10 -

## Optimistic scenario, Risk-free Sales forecast

Type of laboratory testing service	year 1			year 2			year 3			year 4			year 5		
	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total
Microbiological testing			25.849 €			30.502 €			35.992 €			42.470 €			50.115 €
Pesticide Residue testing			514.212 €			606.770 €			715.989 €			844.867 €			996.943 €
Mycotoxin testing			20.675 €			24.397 €			28.788 €			33.970 €			40.085 €
Nutritional analysis testing			90.480 €			106.766 €			125.984 €			148.662 €			175.421 €
Heavy metals, Food preservatives			40.280 €			47.530 €			56.086 €			66.181 €			78.094 €
Soil testing			5.310 €			6.266 €			7.394 €			8.724 €			10.295 €
GMO testing			8.820 €			10.408 €			12.281 €			14.492 €			17.100 €
Sensory testing			0 €			0 €			0 €			0 €			0 €
Plant Protection Products & Fertilizers testing			280 €			330 €			390 €			460 €			543 €
Fats & Oils testing			7.680 €			9.062 €			10.694 €			12.618 €			14.890 €
Organic & Inorganic Contaminants testing			18.165 €			21.435 €			25.293 €			29.846 €			35.218 €
<b>TOTAL</b>	9.920		<b>731.751 €</b>	11.706		<b>863.466 €</b>	13.813		<b>1.018.890 €</b>	16.299		<b>1.202.290 €</b>	19.233		<b>1.418.702 €</b>
in house services	*		209.042 €			822.231 €			970.232 €			1.144.874 €			1.350.952 €
subcontracted services	7.085		522.709 €	555		41.235 €	654		48.657 €	772		57.416 €	911		67.751 €

## Optimistic scenario, delay Risk for ISO 17025 accreditation Sales forecast

Type of laboratory testing service	year 1			year 2			year 3			year 4			year 5		
	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total
Microbiological testing			25.849 €			30.502 €			35.992 €			42.470 €			50.115 €
Pesticide Residue testing			514.212 €			606.770 €			715.989 €			844.867 €			996.943 €
Mycotoxin testing			20.675 €			24.397 €			28.788 €			33.970 €			40.085 €
Nutritional analysis testing			90.480 €			106.766 €			125.984 €			148.662 €			175.421 €
Heavy metals, Food preservatives			40.280 €			47.530 €			56.086 €			66.181 €			78.094 €
Soil testing			5.310 €			6.266 €			7.394 €			8.724 €			10.295 €
GMO testing			8.820 €			10.408 €			12.281 €			14.492 €			17.100 €
Sensory testing			0 €			0 €			0 €			0 €			0 €
Plant Protection Products & Fertilizers testing			280 €			330 €			390 €			460 €			543 €
Fats & Oils testing			7.680 €			9.062 €			10.694 €			12.618 €			14.890 €
Organic & Inorganic Contaminants testing			18.165 €			21.435 €			25.293 €			29.846 €			35.218 €
<b>TOTAL</b>	9.920		<b>731.751 €</b>	11.706		<b>863.466 €</b>	13.813		<b>1.018.890 €</b>	16.299		<b>1.202.290 €</b>	19.233		<b>1.418.702 €</b>
in house services	*		209.042 €			246.669 €			970.232 €			1.144.874 €			1.350.952 €
subcontracted services	7.085		522.709 €	8.360		616.797 €	654		48.657 €	772		57.416 €	911		67.751 €

## Base scenario, Risk-free Sales forecast

Type of laboratory testing service	year 1			year 2			year 3			year 4			year 5		
	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total
Microbiological testing			24.490 €			27.429 €			30.720 €			34.407 €			38.535 €
Pesticide Residue testing			471.580 €			528.170 €			591.550 €			662.536 €			742.040 €
Mycotoxin testing			19.383 €			21.709 €			24.314 €			27.232 €			30.500 €
Nutritional analysis testing			81.432 €			91.204 €			102.148 €			114.406 €			128.135 €
Heavy metals, Food preservatives			38.772 €			43.425 €			48.636 €			54.472 €			61.008 €
Soil testing			5.310 €			5.947 €			6.661 €			7.460 €			8.355 €
GMO testing			8.820 €			9.878 €			11.064 €			12.391 €			13.878 €
Sensory testing			0 €			0 €			0 €			0 €			0 €
Plant Protection Products & Fertilizers testing			280 €			314 €			351 €			393 €			441 €
Fats & Oils testing			7.680 €			8.602 €			9.634 €			10.790 €			12.085 €
Organic & Inorganic Contaminants testing			18.165 €			20.345 €			22.786 €			25.521 €			28.583 €
<b>TOTAL</b>	9.284		<b>675.912 €</b>	10.398		<b>757.021 €</b>	11.646		<b>847.864 €</b>	13.043		<b>949.608 €</b>	14.609		<b>1.063.561 €</b>
in house services	*		192.290 €			717.883 €			804.029 €			900.512 €			1.008.574 €
subcontracted services	6.640		483.622 €	526		39.138 €	590		43.835 €	660		49.095 €	740		54.987 €

## Base scenario, delay Risk for ISO 17025 accreditation Sales forecast

Type of laboratory testing service	year 1			year 2			year 3			year 4			year 5		
	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total
Microbiological testing			24.490 €			27.429 €			30.720 €			34.407 €			38.535 €
Pesticide Residue testing			471.580 €			528.170 €			591.550 €			662.536 €			742.040 €
Mycotoxin testing			19.383 €			21.709 €			24.314 €			27.232 €			30.500 €
Nutritional analysis testing			81.432 €			91.204 €			102.148 €			114.406 €			128.135 €
Heavy metals, Food preservatives			38.772 €			43.425 €			48.636 €			54.472 €			61.008 €
Soil testing			5.310 €			5.947 €			6.661 €			7.460 €			8.355 €
GMO testing			8.820 €			9.878 €			11.064 €			12.391 €			13.878 €
Sensory testing			0 €			0 €			0 €			0 €			0 €
Plant Protection Products & Fertilizers testing			280 €			314 €			351 €			393 €			441 €
Fats & Oils testing			7.680 €			8.602 €			9.634 €			10.790 €			12.085 €
Organic & Inorganic Contaminants testing			18.165 €			20.345 €			22.786 €			25.521 €			28.583 €
<b>TOTAL</b>	9.284		<b>675.912 €</b>	10.398		<b>757.021 €</b>	11.646		<b>847.864 €</b>	13.043		<b>949.608 €</b>	14.609		<b>1.063.561 €</b>
in house services	*		192.290 €			215.365 €			804.029 €			900.512 €			1.008.574 €
subcontracted services	6.640		483.622 €	7.437		541.657 €	590		43.835 €	660		49.095 €	740		54.987 €

## Pessimistic scenario, Risk-free Sales forecast

Type of laboratory testing service	year 1			year 2			year 3			year 4			year 5		
	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total
Microbiological testing			21.971 €			25.267 €			27.794 €			30.573 €			33.631 €
Pesticide Residue testing			437.080 €			502.642 €			552.906 €			608.197 €			669.017 €
Mycotoxin testing			17.574 €			20.210 €			22.231 €			24.454 €			26.900 €
Nutritional analysis testing			76.908 €			88.444 €			97.289 €			107.017 €			117.719 €
Heavy metals, Food preservatives			34.238 €			39.374 €			43.311 €			47.642 €			52.406 €
Soil testing			5.310 €			6.107 €			6.717 €			7.389 €			8.128 €
GMO testing			8.820 €			10.143 €			11.157 €			12.273 €			13.500 €
Sensory testing			0 €			0 €			0 €			0 €			0 €
Plant Protection Products & Fertilizers testing			280 €			322 €			354 €			390 €			429 €
Fats & Oils testing			7.680 €			8.832 €			9.715 €			10.687 €			11.755 €
Organic & Inorganic Contaminants testing			18.165 €			20.890 €			22.979 €			25.277 €			27.804 €
<b>TOTAL</b>	8.525		<b>628.026 €</b>	9.804		<b>722.230 €</b>	10.784		<b>794.453 €</b>	11.863		<b>873.899 €</b>	13.049		<b>961.289 €</b>
in house services	*		177.924 €			682.044 €			750.248 €			825.273 €			907.800 €
subcontracted services	6.914		450.102 €	541		40.187 €	595		44.205 €	654		48.626 €	719		53.489 €

## Pessimistic scenario, delay Risk for ISO 17025 accreditation Sales forecast

Type of laboratory testing service	year 1			year 2			year 3			year 4			year 5		
	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total	Nr. Of samples	average price per sample	total
Microbiological testing			21.971 €			25.267 €			27.794 €			30.573 €			33.631 €
Pesticide Residue testing			437.080 €			502.642 €			552.906 €			608.197 €			669.017 €
Mycotoxin testing			17.574 €			20.210 €			22.231 €			24.454 €			26.900 €
Nutritional analysis testing			76.908 €			88.444 €			97.289 €			107.017 €			117.719 €
Heavy metals, Food preservatives			34.238 €			39.374 €			43.311 €			47.642 €			52.406 €
Soil testing			5.310 €			6.107 €			6.717 €			7.389 €			8.128 €
GMO testing			8.820 €			10.143 €			11.157 €			12.273 €			13.500 €
Sensory testing			0 €			0 €			0 €			0 €			0 €
Plant Protection Products & Fertilizers testing			280 €			322 €			354 €			390 €			429 €
Fats & Oils testing			7.680 €			8.832 €			9.715 €			10.687 €			11.755 €
Organic & Inorganic Contaminants testing			18.165 €			20.890 €			22.979 €			25.277 €			27.804 €
<b>TOTAL</b>	8.525		<b>628.026 €</b>	9.804		<b>722.230 €</b>	10.784		<b>794.453 €</b>	11.863		<b>873.899 €</b>	13.049		<b>961.289 €</b>
in house services	*		177.924 €			204.613 €			750.248 €			825.273 €			907.800 €
subcontracted services	6.109		450.102 €	7.025		517.617 €	595		44.205 €	654		48.626 €	719		53.489 €

## Optimistic scenario, Risk-free - Performance

Income Statement						
fiscal Year End	year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues		731.751 €	863.466 €	1.018.890 €	1.202.290 €	1.418.702 €
Cost of Goods Sold		476.546 €	277.163 €	324.495 €	388.932 €	449.001 €
Gross Margin		255.205 €	586.303 €	694.395 €	813.358 €	969.701 €
%		34,88%	67,90%	68,15%	67,65%	68,35%
Other Operating expenses		299.960 €	303.104 €	308.792 €	330.848 €	332.048 €
EBITDA		-44.755 €	283.199 €	385.603 €	482.510 €	637.653 €
%		-6,12%	32,80%	37,85%	40,13%	44,95%
Depreciation & Amortisation expenses		-177.601 €	-177.601 €	-177.601 €	-177.601 €	-177.601 €
EBIT		-222.357 €	105.597 €	208.002 €	304.909 €	460.051 €
interest expenses (%)		0	0	0	0	0
Net Income Before Taxes		-222.357 €	105.597 €	208.002 €	304.909 €	460.051 €
corporate tax 16%			16.896 €	33.280 €	48.785 €	73.608 €
Net Income after taxes		-222.357 €	88.702 €	174.721 €	256.123 €	386.443 €
payment occurs in 30 days upon invoice issue :						
Total non-current liabilities		776.506 €	580.267 €	633.287 €	719.780 €	781.049 €
Trade account payable	0 €	31.642 €	13.647 €	16.104 €	19.002 €	22.423 €
Expenses	0 €	744.864 €	566.620 €	617.183 €	700.778 €	758.627 €
Total non-current Assets	0 €	731.751 €	863.466 €	1.018.890 €	1.202.290 €	1.418.702 €
Cash and cash equivalent	0 €	670.772 €	791.510 €	933.982 €	1.102.099 €	1.300.477 €
Trade account receivable	0 €	60.979 €	71.955 €	84.907 €	100.191 €	118.225 €
corporate tax 16%		0 €	16.896 €	33.280 €	48.785 €	73.608 €
inDIRECT METHOD						
cash flow statement						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
<b>cash flow from operating activities</b>						
Net Income Before Taxes	0 €	-222.357 €	105.597 €	208.002 €	304.909 €	460.051 €
Depreciation & Amortisation	0 €	177.601 €	177.601 €	177.601 €	177.601 €	177.601 €
change in trade receivables		-60.979 €	-10.976 €	-12.952 €	-15.283 €	-18.034 €
change in trade payables		31.642 €	-17.995 €	2.456 €	2.899 €	3.420 €
corporate tax 16%			-16.896 €	-33.280 €	-48.785 €	-73.608 €
Cash generated from operations	0 €	-74.093 €	237.332 €	341.827 €	421.340 €	549.431 €
<b>Cash flow from Investing Activities</b>						
Equipment						
intangible assets						
Cash flow from Investing Activities	0 €	0 €	0 €	0 €	0 €	0 €
<b>Cash flow from Financing activities</b>						
Divident paid	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities	0 €	0 €	0 €	0 €	0 €	0 €
Change in Cash	0 €	-74.093 €	237.332 €	341.827 €	421.340 €	549.431 €
Cash from previous	0 €	0 €	-74.093 €	163.239 €	505.067 €	926.406 €
Cash for the next	0 €	-74.093 €	163.239 €	505.067 €	926.406 €	1.475.837 €
Ner Present Value (NPV)						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
investment	-1.145.590 €					
yearly cash flows		-74.093 €	163.239 €	505.067 €	926.406 €	1.475.837 €
salvage value at the end of the project						276.083 €
targeted rate of return (%)	5,0%					
annual return :		-74.093 €	163.239 €	505.067 €	926.406 €	1.751.920 €
PV :		-70.564,30 €	148.062,84 €	436.295,46 €	762.156,88 €	1.372.675,46 €
NPV =	1.503.036,33 €					
IRR =	25,55%					
Profitability Index (PI) =	1,3					
pay back calculation	-1.145.590 €					
		-74.093 €	163.239 €	505.067 €	926.406 €	1.475.837 €
cumulative Cash Flows	-1.145.590 €	-1.219.683 €	-1.056.443 €	-551.377 €	375.030 €	1.850.867 €



## Optimistic scenario, delay Risk for ISO 17025 accreditation - Performance

<b>Income Statement</b>						
<b>fiscal Year End</b>	<b>year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Revenues		731.751 €	863.466 €	1.018.890 €	1.202.290 €	1.418.702 €
Cost of Goods Sold		476.546 €	574.407 €	324.495 €	388.932 €	449.001 €
Gross Margin		255.205 €	289.059 €	694.395 €	813.358 €	969.701 €
%		34,88%	33,48%	68,15%	67,65%	68,35%
Other Operating expenses		299.960 €	303.104 €	308.792 €	330.848 €	332.048 €
<b>EBITDA</b>		-44.755 €	-14.045 €	385.603 €	482.510 €	637.653 €
%		-6,12%	-1,63%	37,85%	40,13%	44,95%
Depreciation & Amortisation expenses		-177.601 €	-177.601 €	-177.601 €	-177.601 €	-177.601 €
<b>EBIT</b>		-222.357 €	-191.646 €	208.002 €	304.909 €	460.051 €
interest expenses (%)		0	0	0	0	0
<b>Net Income Before Taxes</b>		-222.357 €	-191.646 €	208.002 €	304.909 €	460.051 €
corporate tax 16%				33.280 €	48.785 €	73.608 €
<b>Net Income after taxes</b>		-222.357 €	-191.646 €	174.721 €	256.123 €	386.443 €
payment occurs in 30 days upon invoice issue :						
<b>Total non-current liabilities</b>		776.506 €	877.511 €	633.287 €	719.780 €	781.049 €
Trade account payable	0 €	31.642 €	37.338 €	16.104 €	19.002 €	22.423 €
Expenses	0 €	744.864 €	840.173 €	617.183 €	700.778 €	758.627 €
<b>Total non-current Assets</b>	0 €	731.751 €	863.466 €	1.018.890 €	1.202.290 €	1.418.702 €
Cash and cash equivalent	0 €	670.772 €	791.510 €	933.982 €	1.102.099 €	1.300.477 €
Trade account receivable	0 €	60.979 €	71.955 €	84.907 €	100.191 €	118.225 €
corporate tax 16%		0 €	0 €	33.280 €	48.785 €	73.608 €
<b>cash flow statement</b>						
<b>indIRECT METHOD</b>						
<b>fiscal Year End</b>	<b>year 0</b>	<b>year 1</b>	<b>year 2</b>	<b>year 3</b>	<b>year 4</b>	<b>year 5</b>
<b>cash flow from operating activities</b>						
Net Income Before Taxes	0 €	-222.357 €	-191.646 €	208.002 €	304.909 €	460.051 €
Depreciation & Amortisation	0 €	177.601 €	177.601 €	177.601 €	177.601 €	177.601 €
change in trade receivables		-60.979 €	-10.976 €	-12.952 €	-15.283 €	-18.034 €
change in trade payables		31.642 €	5.696 €	-21.234 €	2.899 €	3.420 €
corporate tax 16%			0 €	-33.280 €	-48.785 €	-73.608 €
<b>Cash generated from operations</b>	0 €	-74.093 €	-19.326 €	318.137 €	421.340 €	549.431 €
<b>Cash flow from Investing Activities</b>						
<b>Equipment</b>						
<b>intangible assets</b>						
Cash flow from Investing Activities	0 €	0 €	0 €	0 €	0 €	0 €
<b>Cash flow from Financing activities</b>						
Divident paid	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities	0 €	0 €	0 €	0 €	0 €	0 €
<b>Change in Cash</b>	0 €	-74.093 €	-19.326 €	318.137 €	421.340 €	549.431 €
<b>Cash from previous</b>	0 €	0 €	-74.093 €	-93.418 €	224.719 €	646.059 €
<b>Cash for the next</b>	0 €	-74.093 €	-93.418 €	224.719 €	646.059 €	1.195.489 €
<b>Net Present Value (NPV)</b>						
<b>fiscal Year End</b>	<b>year 0</b>	<b>year 1</b>	<b>year 2</b>	<b>year 3</b>	<b>year 4</b>	<b>year 5</b>
investment	-1.145.590 €					
yearly cash flows		-74.093 €	-93.418 €	224.719 €	646.059 €	1.195.489 €
salvage value at the end of the project						276.083 €
<b>targeted rate of return (%)</b>	5,0%					
<b>annual return :</b>		-74.093 €	-93.418 €	224.719 €	646.059 €	1.471.573 €
<b>PV :</b>		-70.564,30 €	-84.732,94 €	194.120,45 €	531.514,02 €	1.153.015,60 €
<b>NPV =</b>	577.762,83 €					
<b>IRR =</b>	11,23%					
<b>Profitability Index (PI) =</b>	0,5					
<b>pay back calculation</b>	-1.145.590 €					
		-74.093 €	-93.418 €	224.719 €	646.059 €	1.195.489 €
<b>cumulative Cash Flows</b>	-1.145.590 €	-1.219.683 €	-1.313.101 €	-1.088.382 €	-442.323 €	753.166 €

## Base scenario, Risk-free - Performance

Income Statement						
fiscal Year End	year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues		675.912 €	757.021 €	847.864 €	949.608 €	1.063.561 €
Cost of Goods Sold		447.256 €	258.508 €	293.720 €	321.734 €	365.192 €
Gross Margin		228.656 €	498.513 €	554.144 €	627.874 €	698.369 €
%		33,83%	65,85%	65,36%	66,12%	65,66%
Other Operating expenses		299.960 €	303.104 €	308.792 €	330.848 €	332.048 €
EBITDA		-71.304 €	195.409 €	245.352 €	297.026 €	366.321 €
%		-10,55%	25,81%	28,94%	31,28%	34,44%
Depreciation & Amortisation expenses		-177.601 €	-177.601 €	-177.601 €	-177.601 €	-177.601 €
EBIT		-248.905 €	17.808 €	67.751 €	119.424 €	188.720 €
interest expenses (%)		0	0	0	0	0
Net Income Before Taxes		-248.905 €	17.808 €	67.751 €	119.424 €	188.720 €
corporate tax 16%			2.849 €	10.840 €	19.108 €	30.195 €
Net Income after taxes		-248.905 €	14.959 €	56.911 €	100.316 €	158.525 €
payment occurs in 30 days upon invoice issue :						
Total non-current liabilities		747.216 €	561.612 €	602.512 €	652.582 €	697.240 €
Trade account payable	0 €	29.263 €	12.096 €	13.548 €	15.174 €	16.994 €
Expenses	0 €	717.953 €	549.516 €	588.964 €	637.408 €	680.245 €
Total non-current Assets	0 €	675.912 €	757.021 €	847.864 €	949.608 €	1.063.561 €
Cash and cash equivalent	0 €	619.586 €	693.936 €	777.209 €	870.474 €	974.931 €
Trade account receivable	0 €	56.326 €	63.085 €	70.655 €	79.134 €	88.630 €
corporate tax 16%		0 €	2.849 €	10.840 €	19.108 €	30.195 €
cash flow statement						
inDIRECT METHOD						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
cash flow from operating activities						
Net Income Before Taxes	0 €	-248.905 €	17.808 €	67.751 €	119.424 €	188.720 €
Depreciation & Amortisation	0 €	177.601 €	177.601 €	177.601 €	177.601 €	177.601 €
change in trade receivables		-56.326 €	-6.759 €	-7.570 €	-8.479 €	-9.496 €
change in trade payables		29.263 €	-17.166 €	1.452 €	1.626 €	1.821 €
corporate tax 16%			-2.849 €	-10.840 €	-19.108 €	-30.195 €
Cash generated from operations	0 €	-98.367 €	168.635 €	228.394 €	271.065 €	328.451 €
Cash flow from Investing Activities						
Equipment						
intangible assets						
Cash flow from Investing Activities	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities						
Divident paid	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities	0 €	0 €	0 €	0 €	0 €	0 €
Change in Cash	0 €	-98.367 €	168.635 €	228.394 €	271.065 €	328.451 €
Cash from previous	0 €	0 €	-98.367 €	70.268 €	298.661 €	569.726 €
Cash for the next	0 €	-98.367 €	70.268 €	298.661 €	569.726 €	898.177 €
Ner Present Value (NPV)						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
investment	-1.145.590 €					
yearly cash flows		-98.367 €	70.268 €	298.661 €	569.726 €	898.177 €
salvage value at the end of the project						276.083 €
targeted rate of return (%)	5,0%					
annual return :		-98.367 €	70.268 €	298.661 €	569.726 €	1.174.260 €
PV :		-93.682,68 €	63.735,03 €	257.995,02 €	468.715,32 €	920.063,73 €
NPV =	471.236,42 €					
IRR =	9,88%					
Profitability Index (PI) =	0,4					
pay back calculation	-1.145.590 €	-98.367 €	70.268 €	298.661 €	569.726 €	898.177 €
cumulative Cash Flows	-1.145.590 €	-1.243.957 €	-1.173.689 €	-875.027 €	-305.301 €	592.876 €

## Base scenario, delay Risk for ISO 17025 accreditation - Performance

<b>Income Statement</b>						
fiscal Year End	year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues		675.912 €	757.021 €	847.864 €	949.608 €	1.063.561 €
Cost of Goods Sold		447.256 €	518.113 €	293.720 €	321.734 €	365.192 €
Gross Margin		228.656 €	238.908 €	554.144 €	627.874 €	698.369 €
%		33,83%	31,56%	65,36%	66,12%	65,66%
Other Operating expenses		299.960 €	303.104 €	308.792 €	330.848 €	332.048 €
EBITDA		-71.304 €	-64.196 €	245.352 €	297.026 €	366.321 €
%		-10,55%	-8,48%	28,94%	31,28%	34,44%
Depreciation & Amortisation expenses		-177.601 €	-177.601 €	-177.601 €	-177.601 €	-177.601 €
EBIT		-248.905 €	-241.797 €	67.751 €	119.424 €	188.720 €
interest expenses (%)		0	0	0	0	0
Net Income Before Taxes		-248.905 €	-241.797 €	67.751 €	119.424 €	188.720 €
corporate tax 16%				10.840 €	19.108 €	30.195 €
Net Income after taxes		-248.905 €	-241.797 €	56.911 €	100.316 €	158.525 €
payment occurs in 30 days upon invoice issue :						
Total non-current liabilities		747.216 €	821.217 €	602.512 €	652.582 €	697.240 €
Trade account payable	0 €	29.263 €	32.774 €	13.548 €	15.174 €	16.994 €
Expenses	0 €	717.953 €	788.443 €	588.964 €	637.408 €	680.245 €
Total non-current Assets	0 €	675.912 €	757.021 €	847.864 €	949.608 €	1.063.561 €
Cash and cash equivalent	0 €	619.586 €	693.936 €	777.209 €	870.474 €	974.931 €
Trade account receivable	0 €	56.326 €	63.085 €	70.655 €	79.134 €	88.630 €
corporate tax 16%		0 €	0 €	10.840 €	19.108 €	30.195 €
<b>cash flow statement</b>						
inDIRECT METHOD						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
<b>cash flow from operating activities</b>						
Net Income Before Taxes	0 €	-248.905 €	-241.797 €	67.751 €	119.424 €	188.720 €
Depreciation & Amortisation	0 €	177.601 €	177.601 €	177.601 €	177.601 €	177.601 €
change in trade receivables		-56.326 €	-6.759 €	-7.570 €	-8.479 €	-9.496 €
change in trade payables		29.263 €	3.512 €	-19.226 €	1.626 €	1.821 €
corporate tax 16%			0 €	-10.840 €	-19.108 €	-30.195 €
Cash generated from operations	0 €	-98.367 €	-67.444 €	207.716 €	271.065 €	328.451 €
<b>Cash flow from Investing Activities</b>						
Equipment						
intangible assets						
Cash flow from Investing Activities	0 €	0 €	0 €	0 €	0 €	0 €
<b>Cash flow from Financing activities</b>						
Divident paid	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities	0 €	0 €	0 €	0 €	0 €	0 €
Change in Cash	0 €	-98.367 €	-67.444 €	207.716 €	271.065 €	328.451 €
Cash from previous	0 €	0 €	-98.367 €	-165.810 €	41.905 €	312.970 €
Cash for the next	0 €	-98.367 €	-165.810 €	41.905 €	312.970 €	641.421 €
<b>Ner Present Value (NPV)</b>						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
investment	-1.145.590 €					
yearly cash flows		-98.367 €	-165.810 €	41.905 €	312.970 €	641.421 €
salvage value at the end of the project						276.083 €
targeted rate of return (%)	5,0%					
annual return :		-98.367 €	-165.810 €	41.905 €	312.970 €	917.504 €
PV :		-93.682,68 €	-150.394,95 €	36.199,37 €	257.481,36 €	718.888,53 €
NPV =	-377.098,37 €					
IRR =	-7,77%					
Profitability Index (PI) =	-0,3					
pay back calculation	-1.145.590 €	-98.367 €	-165.810 €	41.905 €	312.970 €	641.421 €
cumulative Cash Flows	-1.145.590 €	-1.243.957 €	-1.409.767 €	-1.367.862 €	-1.054.892 €	-413.471 €

## Pessimistic scenario, Risk-free - Performance

Income Statement						
fiscal Year End	year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues		628.026 €	722.230 €	794.453 €	873.899 €	961.289 €
Cost of Goods Sold		423.181 €	253.196 €	284.956 €	323.005 €	351.532 €
Gross Margin		204.845 €	469.034 €	509.498 €	550.894 €	609.757 €
%		32,62%	64,94%	64,13%	63,04%	63,43%
Other Operating expenses		299.960 €	303.104 €	308.792 €	330.848 €	332.048 €
EBITDA		-95.115 €	165.930 €	200.706 €	220.046 €	277.709 €
%		-15,15%	22,97%	25,26%	25,18%	28,89%
Depreciation & Amortisation expenses		-177.601 €	-177.601 €	-177.601 €	-177.601 €	-177.601 €
EBIT		-272.716 €	-11.671 €	23.104 €	42.445 €	100.108 €
interest expenses (%)		0	0	0	0	0
Net Income Before Taxes		-272.716 €	-11.671 €	23.104 €	42.445 €	100.108 €
corporate tax 16%				3.697 €	6.791 €	16.017 €
Net Income after taxes		-272.716 €	-11.671 €	19.408 €	35.654 €	84.091 €
payment occurs in 30 days upon invoice issue :						
Total non-current liabilities		723.141 €	556.300 €	593.748 €	653.853 €	683.580 €
Trade account payable	0 €	27.219 €	11.652 €	12.817 €	14.099 €	15.508 €
Expenses	0 €	695.923 €	544.648 €	580.931 €	639.754 €	668.071 €
Total non-current Assets	0 €	628.026 €	722.230 €	794.453 €	873.899 €	961.289 €
Cash and cash equivalent	0 €	575.691 €	662.045 €	728.249 €	801.074 €	881.181 €
Trade account receivable	0 €	52.336 €	60.186 €	66.204 €	72.825 €	80.107 €
corporate tax 16%		0 €	0 €	3.697 €	6.791 €	16.017 €
cash flow statement						
indIRECT METHOD						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
cash flow from operating activities						
Net Income Before Taxes	0 €	-272.716 €	-11.671 €	23.104 €	42.445 €	100.108 €
Depreciation & Amortisation	0 €	177.601 €	177.601 €	177.601 €	177.601 €	177.601 €
change in trade receivables		-52.336 €	-7.850 €	-6.019 €	-6.620 €	-7.282 €
change in trade payables		27.219 €	-15.567 €	1.165 €	1.282 €	1.410 €
corporate tax 16%			0 €	-3.697 €	-6.791 €	-16.017 €
Cash generated from operations	0 €	-120.232 €	142.513 €	192.156 €	207.916 €	255.819 €
Cash flow from Investing Activities						
Equipment						
intangible assets						
Cash flow from Investing Activities	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities						
Divident paid	0 €	0 €	0 €	0 €	0 €	0 €
Cash flow from Financing activities	0 €	0 €	0 €	0 €	0 €	0 €
Change in Cash	0 €	-120.232 €	142.513 €	192.156 €	207.916 €	255.819 €
Cash from previous	0 €	0 €	-120.232 €	22.281 €	214.437 €	422.353 €
Cash for the next	0 €	-120.232 €	22.281 €	214.437 €	422.353 €	678.172 €
Net Present Value (NPV)						
fiscal Year End	year 0	year 1	year 2	year 3	year 4	year 5
investment	-1.145.590 €					
yearly cash flows		-120.232 €	22.281 €	214.437 €	422.353 €	678.172 €
salvage value at the end of the project						276.083 €
targeted rate of return (%)	5,0%					
annual return :		-120.232 €	22.281 €	214.437 €	422.353 €	954.256 €
PV :		-114.506,59 €	20.209,85 €	185.238,72 €	347.470,99 €	747.684,34 €
NPV =	40.507,31 €					
IRR =	1,31%					
Profitability Index (PI) =	0,035					
pay back calculation	-1.145.590 €					
		-120.232 €	22.281 €	214.437 €	422.353 €	678.172 €
cumulative Cash Flows	-1.145.590 €	-1.265.822 €	-1.243.541 €	-1.029.104 €	-606.750 €	71.422 €

## Pessimistic scenario, delay Risk for ISO 17025 accreditation - Performance

<b>Income Statement</b>						
<b>fiscal Year End</b>	<b>year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Revenues		628.026 €	722.230 €	794.453 €	873.899 €	961.289 €
Cost of Goods Sold		421.844 €	499.756 €	284.956 €	323.005 €	340.032 €
Gross Margin		206.182 €	222.475 €	509.498 €	550.894 €	621.257 €
%		32,83%	30,80%	64,13%	63,04%	64,63%
Other Operating expenses		275.960 €	279.104 €	284.792 €	306.848 €	308.048 €
EBITDA		-69.778 €	-56.629 €	224.706 €	244.046 €	313.209 €
%		-11,11%	-7,84%	28,28%	27,93%	32,58%
Depreciation & Amortisation expenses		-177.601 €	-177.601 €	-177.601 €	-177.601 €	-177.601 €
EBIT		-247.379 €	-234.231 €	47.104 €	66.445 €	135.608 €
interest expenses (%)		0	0	0	0	0
<b>Net Income Before Taxes</b>		-247.379 €	-234.231 €	47.104 €	66.445 €	135.608 €
corporate tax 16%				7.537 €	10.631 €	21.697 €
<b>Net Income after taxes</b>		-247.379 €	-234.231 €	39.568 €	55.814 €	113.911 €
payment occurs in 30 days upon invoice issue :						
<b>Total non-current liabilities</b>		697.804 €	778.860 €	569.748 €	629.853 €	648.080 €
Trade account payable	0 €	27.219 €	31.301 €	12.817 €	14.099 €	15.508 €
Expenses	0 €	670.586 €	747.558 €	556.931 €	615.754 €	632.571 €
<b>Total non-current Assets</b>	0 €	628.026 €	722.230 €	794.453 €	873.899 €	961.289 €
Cash and cash equivalent	0 €	575.691 €	662.045 €	728.249 €	801.074 €	881.181 €
Trade account receivable	0 €	52.336 €	60.186 €	66.204 €	72.825 €	80.107 €
corporate tax 16%		0 €	0 €	7.537 €	10.631 €	21.697 €
<b>cash flow statement</b>						
<b>inDIRECT METHOD</b>						
<b>fiscal Year End</b>	<b>year 0</b>	<b>year 1</b>	<b>year 2</b>	<b>year 3</b>	<b>year 4</b>	<b>year 5</b>
<b>cash flow from operating activities</b>						
Net Income Before Taxes	0 €	-247.379 €	-234.231 €	47.104 €	66.445 €	135.608 €
Depreciation & Amortisation	0 €	177.601 €	177.601 €	177.601 €	177.601 €	177.601 €
change in trade receivables		-52.336 €	-7.850 €	-6.019 €	-6.620 €	-7.282 €
change in trade payables		27.219 €	4.083 €	-18.484 €	1.282 €	1.410 €
corporate tax 16%			0 €	-7.537 €	-10.631 €	-21.697 €
<b>Cash generated from operations</b>	0 €	-94.895 €	-60.397 €	192.666 €	228.076 €	285.639 €
<b>Cash flow from Investing Activities</b>						
<b>Equipment</b>						
<b>Intangible assets</b>						
<b>Cash flow from Investing Activities</b>	0 €	0 €	0 €	0 €	0 €	0 €
<b>Cash flow from Financing activities</b>						
<b>Divident paid</b>	0 €	0 €	0 €	0 €	0 €	0 €
<b>Cash flow from Financing activities</b>	0 €	0 €	0 €	0 €	0 €	0 €
<b>Change in Cash</b>	0 €	-94.895 €	-60.397 €	192.666 €	228.076 €	285.639 €
<b>Cash from previus</b>	0 €	0 €	-94.895 €	-155.292 €	37.374 €	265.450 €
<b>Cash for the next</b>	0 €	-94.895 €	-155.292 €	37.374 €	265.450 €	551.090 €
<b>Ner Present Value (NPV)</b>						
<b>fiscal Year End</b>	<b>year 0</b>	<b>year 1</b>	<b>year 2</b>	<b>year 3</b>	<b>year 4</b>	<b>year 5</b>
investment	-1.145.590 €					
yearly cash flows		-94.895 €	-155.292 €	37.374 €	265.450 €	551.090 €
salvage value at the end of the project						276.083 €
<b>targeted rate of return (%)</b>	5,0%					
<b>annual return :</b>		-94.895 €	-155.292 €	37.374 €	265.450 €	827.173 €
<b>PV :</b>		-90.375,99 €	-140.854,16 €	32.285,28 €	218.386,73 €	648.111,69 €
<b>NPV =</b>	-478.036,45 €					
<b>IRR =</b>	-10,79%					
<b>Profitability Index (PI) =</b>	-0,4					
<b>pay back calculation</b>	-1.145.590 €					
<b>cumulative Cash Flows</b>	-1.145.590 €	-1.240.485 €	-1.395.776 €	-1.358.402 €	-1.092.952 €	-541.862 €