



MYTILINEOS

MYTILINEOS SOCIO-ECONOMIC IMPACT IN GREECE

(1st January 2017 to 31st December 2017)



**"MYTILINEOS impact
in the national
economy &
employment"**



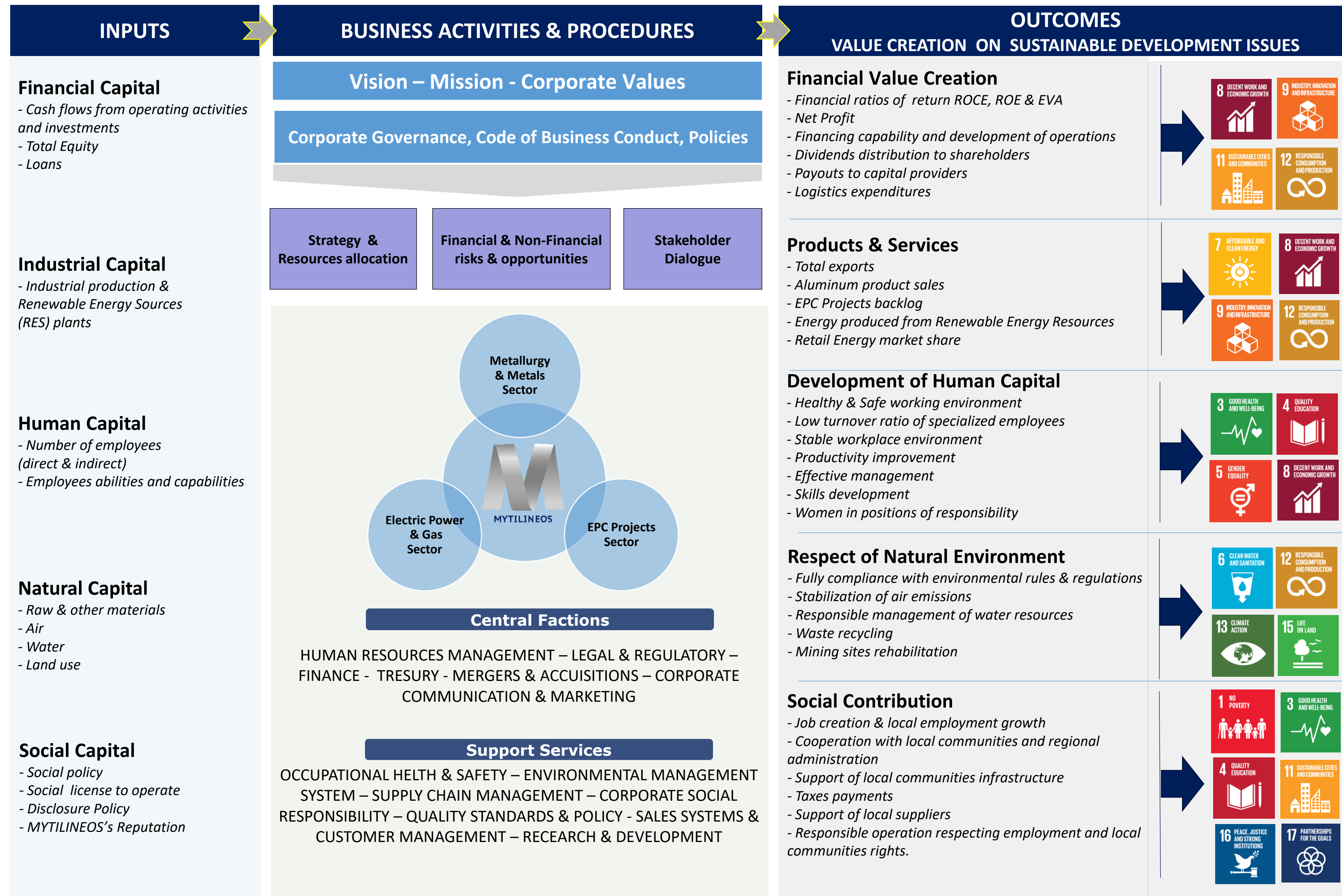
MYTILINEOS: BRIEF BUSINESS PROFILE

- MYTILINEOS is one of the largest industrial businesses in Greece growing at international level in Metallurgy, EPC & Infrastructure Projects, Electric Power and Natural Gas Trading sectors. As a responsible industrial company, it pursues continuous application of business excellence, balancing economic growth with sustainable development.
- It was established in Greece in 1990 and is a listed company with a consolidated turnover exceeding 1.5bn EUR.
- MYTILINEOS owns the most important vertically integrated production and trading plant of alumina and aluminum in the European Union and along with its mines, it is a driving force for the national and European economy and the Greek regions. It is the second largest producer of bauxite in Greece and by extension in Europe, with an annual production outweighing 650,000 tons of bauxite from underground work sites.
- It ranks amongst the ten largest companies in the sectors of EPC energy projects worldwide, while implementing significant energy projects in the markets of Europe, Middle East and Africa.
- It is the largest private electric power producer with 1,200MW of gas-fired thermal projects in Greece and a portfolio of Renewable Energy Sources (RES) projects above 130 MW, greater than 14% of the active and licensed installed thermal production capacity of the country.



MYTILINEOS Socio-economic impact in Greece (2017)

MYTILINEOS BUSINESS MODEL





PURPOSE OF THE STUDY

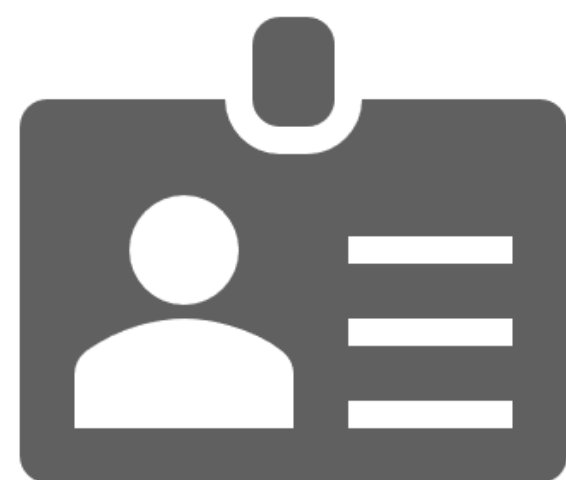
- After almost 30 years of operation, MYTILINEOS key internal & external Stakeholder groups (shareholders, employees, suppliers etc) have gained significant benefits. The company's participation in job creation, in economic growth of both local communities where it operates and of the country as a whole is important.
- Acknowledging its contribution, the company identified the need to measure its socio-economic footprint, putting in place a reliable and internationally recognized methodology. The aim is to inform all Stakeholders in order to create a concept of a broader socio-economic value arising from MYTILINEOS activity for the country's benefit.
- In this context, during the period May 2018 – September 2018, the Climate Change and Sustainable Development services department of EY conducted this study with reference period the time span from January 1st 2017 to December 31st 2017.
- This study determines and illustrates MYTILINEOS broader contribution to Greece, acknowledging the importance of **creating value for national economy and employment, contributing at the same time to the UN Sustainable Development Goals attainment.**



MYTILINEOS Socio-economic impact in Greece (2017)

METHODOLOGY OF THE STUDY

MYTILINEOS socio-economic impact in Greece derives from its economic activity across its value chain, from production until the promotion and sale of its products. For its operation, MYTILINEOS is supplied with raw materials, products and services from Greek suppliers, supporting thus various business sectors of Greek economy, such as the electricity and gas sector, the construction and metallurgy sector. To these directions, the company supports income, tax revenues and jobs and respectively the same applies for its suppliers and associates in their own value chain. **For data evaluation and assessment, the input-output economic model was used, identifying and describing the correlations between the various sectors of Greek economy.**



INPUT

The Company's financial year results as well as the remaining direct results from its activity. Based on MYTILINEOS data and financial statements (revenues, employees, salaries, taxes, payments to suppliers), and data from the European Statistical Service (Eurostat).

MODEL

Input-output model. This methodology allows modeling of successive impacts within the economy and therefore calculating the added value and the jobs across the entire supply chain.

OUTPUT

Added value and the employment generated across MYTILINEOS value chain in Greece.



MYTILINEOS Socio-economic impact in Greece (2017)

METHODOLOGY OF THE STUDY

The assessment of the overall MYTILINEOS socio-economic impact in Greece is analyzed in three categories of impact: **direct, indirect and induced**:

In the framework of the study, the activity of the three Business Activity Sectors (**Metallurgy, Energy and Constructions**) and of their respective subsidiaries constituting MYTILINEOS business system in Greece were investigated.



DIRECT

The direct impact includes the value generated directly by the company for its interested parties, such as jobs created for the company and salaries paid by MYTILINEOS to its employees, as well as taxes and insurance costs paid to the Treasury.

INDIRECT

Indirect impact is defined as the impact of MYTILINEOS to its suppliers. The Greek economy benefits from the company's purchases in products and services, as such purchases generate income for its suppliers, jobs and salaries in the supply chain as well as taxes paid to the Treasury.

INDUCED

An induced impact is defined as the result generated from MYTILINEOS employees' salaries consumption as well as its suppliers' employees, as a result of the demand generated by the company in its supply chain. Such impacts include the creation of induced jobs, salaries and taxes.



MYTILINEOS Socio-economic impact in Greece (2017)

MYTILINEOS CONTRIBUTION TO GREEK ECONOMY AND EMPLOYMENT (BROAD PICTURE)

MYTILINEOS with its activity:

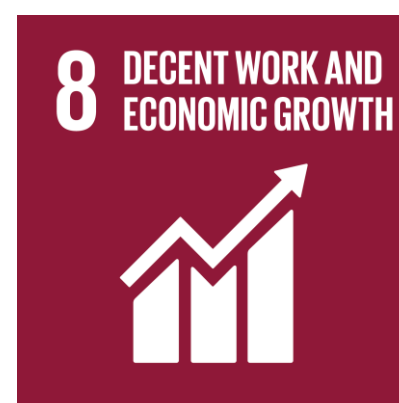
It creates total*
added value at
€1.06 bn.
equal to **0.6%**
of the total national GDP

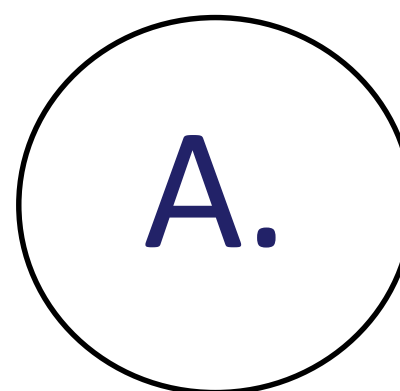
offers total*
tax contribution at
€244 mn.
equal to **0.3%** of total Greek tax
revenue

It supports
in total*
13,598
jobs equal to **0.4%** of total
employment in Greece

*It includes direct, indirect & induced impact

Contributing, at the same time, to **Global Sustainable Development Goals** attainment





MYTILINEOS CONTRIBUTION TO NATIONAL ECONOMY



MYTILINEOS Socio-economic impact in Greece (2017)

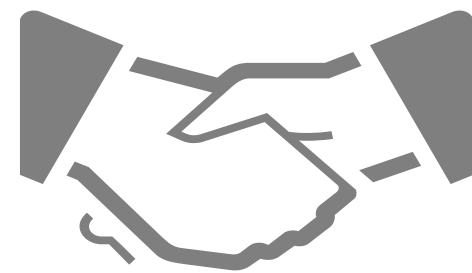
A.1. MYTILINEOS CONTRIBUTION TO THE MAIN GROUPS OF SOCIAL PARTNERS (DIRECT ECONOMIC VALUE)

The following data present the direct value created by MYTILINEOS and distributed to its basic Social Partners for all its activities. Moreover, through investments and Corporate Social Responsibility actions, these benefits extend across the broader Greek economy, the society and the environment.



Remuneration*
of employees
> **€70 mn.**

* Employees' gross salary



Expenses to
Greek suppliers
> **€740 mn.**



Direct taxes* paid in
Greece
> **€40mn.**

* Employers' contributions are included



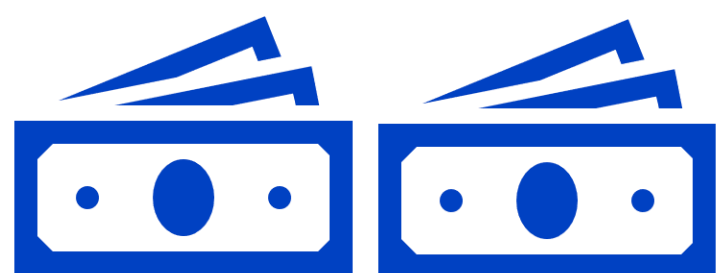
Corporate Social
Responsibility *
> **€2 mn.**

* Local communities, academic bodies, NGOs,
vulnerable social groups



MYTILINEOS Socio-economic impact in Greece (2017)

A.2. MYTILINEOS CONTRIBUTION TO THE COUNTRY'S GDP



MYTILINEOS total contribution to the **GDP*** stands at

€1.06 bn.

and being distinguished in direct, indirect and induced.

*MYTILINEOS contribution to the country's GDP is assessed by the total added value created for Greek economy from the company's activity.

**Direct
contribution
€449 mn.**

....MYTILINEOS added value resulting from its activities and corresponding to 0.25% of the country's total GDP.

**Indirect
contribution
€481 mn.**

....MYTILINEOS added value created from the company's suppliers' activities as a result of purchases the company carries out to support its operation. Equal to 0.25% of the total national GDP.

**Induced
contribution
€128 mn.**

.....added value resulting from the multiplying effects deriving from MYTILINEOS employees as well as its suppliers' employees in the broader economy due to purchases incurred. Equal to 0.07% of the total national GDP.



The total added value created by MYTILINEOS is equal to

0.6%

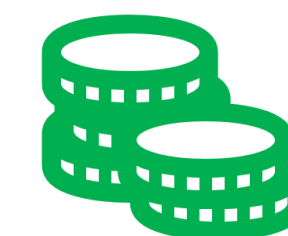
of the total national GDP.



For each **€1** of MYTILINEOS direct contribution, an additional

€1.36

of added value is created for Greek economy.



The added value created by **MYTILINEOS** suppliers and attributed to the company is higher than its direct contribution. A fact highlighting the multiplying benefit for the Greek economy from MYTILINEOS operation.



MYTILINEOS Socio-economic impact in Greece (2017)

A.3. MYTILINEOS TOTAL CONTRIBUTION TO THE GREEK TAX REVENUE



MYTILINEOS total contribution in tax revenues amounts to **€244 mn.** and is distinguished in direct, indirect and induced.

Direct contribution
€40 mn.

....direct taxes paid to the Treasury and regard notably taxes and employers' contributions corresponding to MYTILINEOS itself.

Indirect contribution
€161 mn.

....indirect taxes refer to those taxes paid by MYTILINEOS suppliers due to the purchases carried out by the company.

Induced contribution
€43 mn.

....induced taxes arising from MYTILINEOS employees and its suppliers' employees' consumption.



The total contribution in tax revenues arising from **MYTILINEOS** activity is equal to **0,3%** of total Greek tax revenue.



€ → € € € €

For each €1 paid by MYTILINEOS as direct taxes, its direct and indirect suppliers pay more than **€4** of taxes as a result of their cooperation with the company.



B.

MYTILINEOS CONTRIBUTION TO DOMESTIC EMPLOYMENT



MYTILINEOS Socio-economic impact in Greece (2017)

B.1. TOTAL NUMBER OF JOBS SUPPORTED BY MYTILINEOS





MYTILINEOS Socio-economic impact in Greece (2017)

B.2. ANALYSIS OF INDIRECT JOBS PER BUSINESS ACTIVITY SECTOR

The following graphs depict a further analysis of the indirect jobs supported by MYTILINEOS, per sector, displaying the results for the sectors of Greek economy where the indirect jobs are more numerous, as results in detail from each activity sector of the Company:

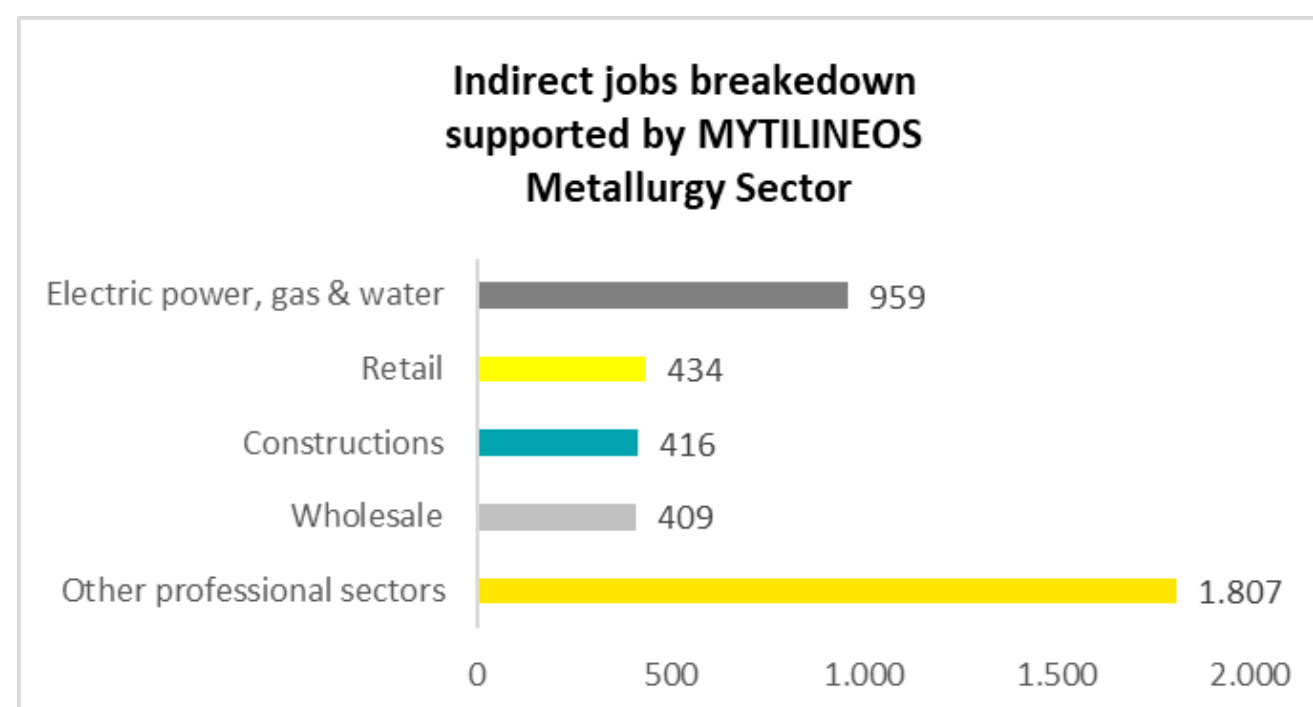
The **indirect jobs supported by MYTILINEOS in its supply chain** amount **totally to**



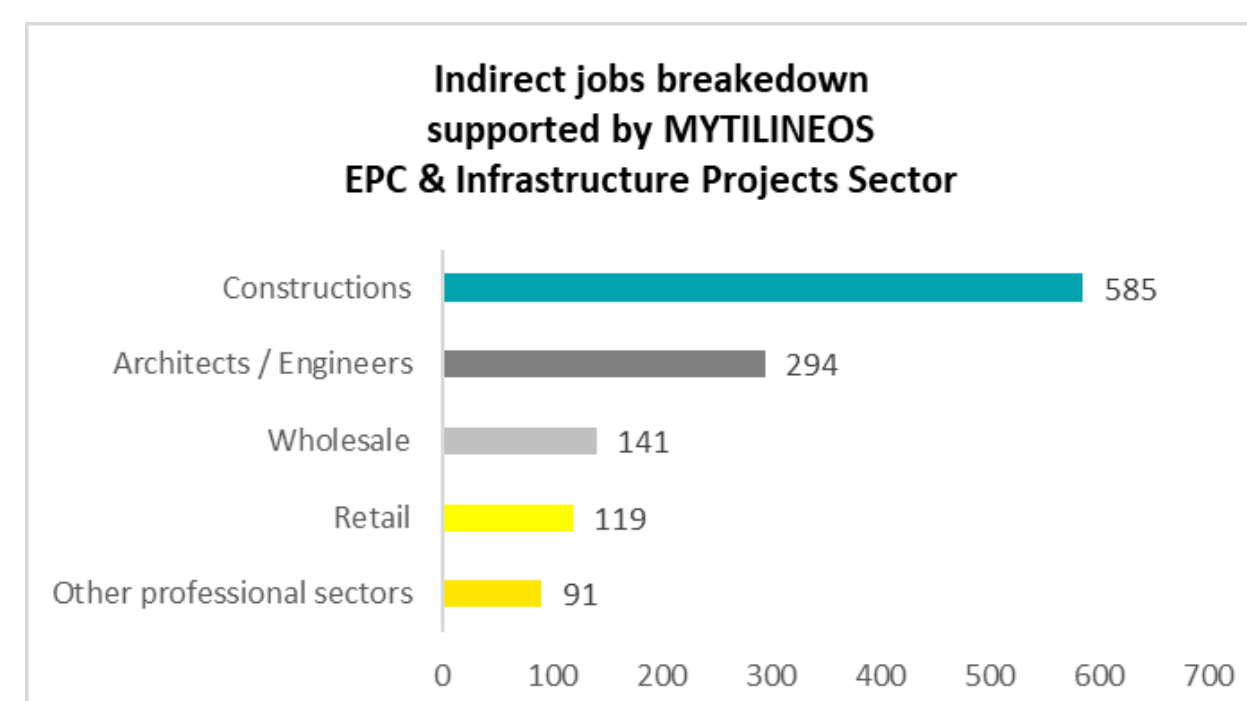
8,352

...corresponding to
0,2%
of total employment in Greece.

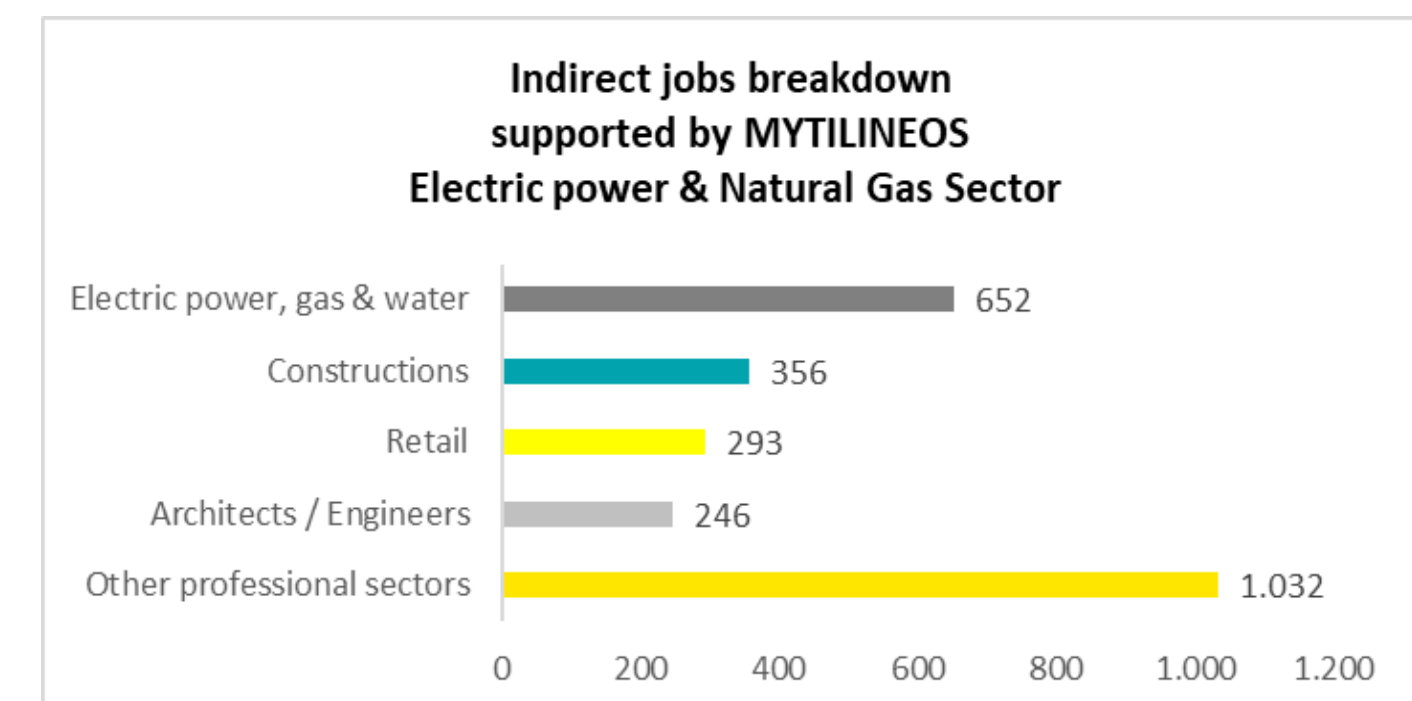
**Metallurgy
sector**
Indirect jobs
4,025



**EPC Infrastructure Projects
sector**
Indirect jobs
1,718



**Electric Power
sector**
Indirect jobs
2,579

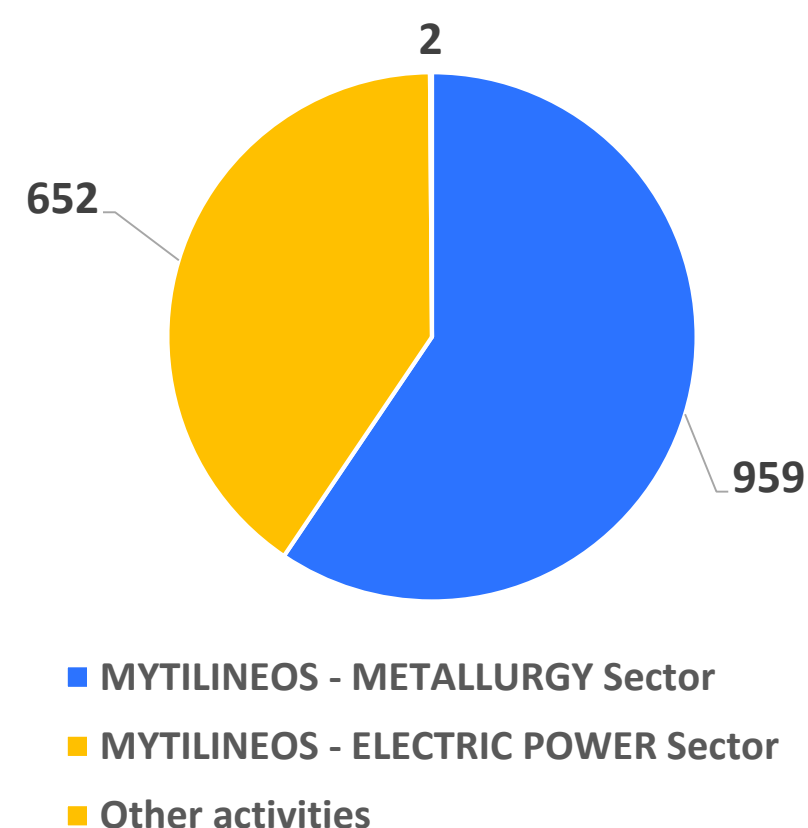




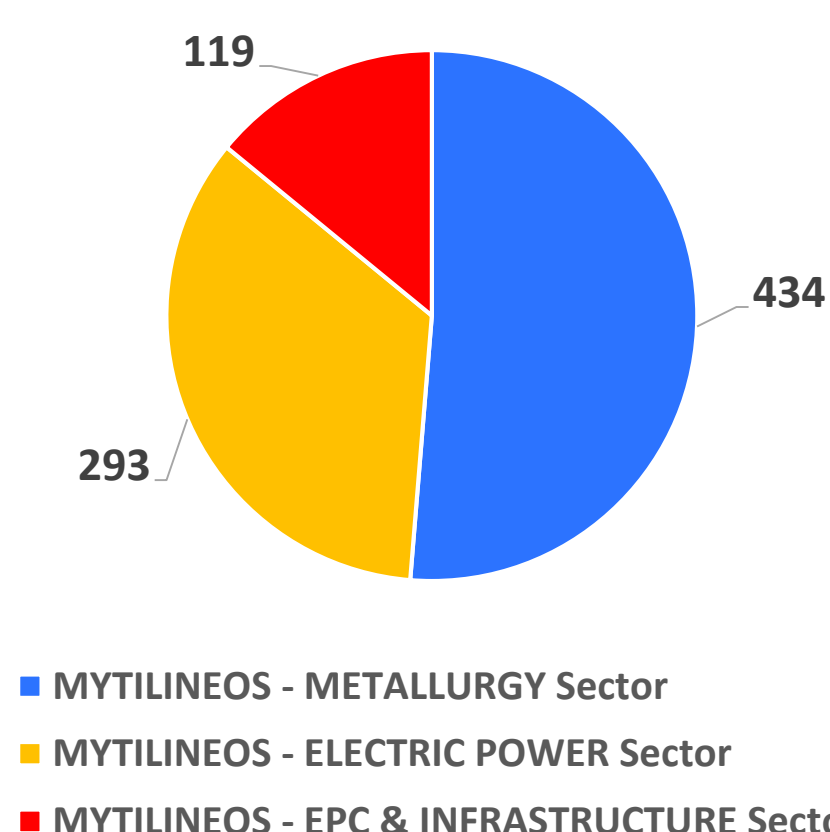
MYTILINEOS Socio-economic impact in Greece (2017)

B.3. ANALYSIS OF INDIRECT JOBS PER PROFESSIONAL SECTOR OF GREEK ECONOMY

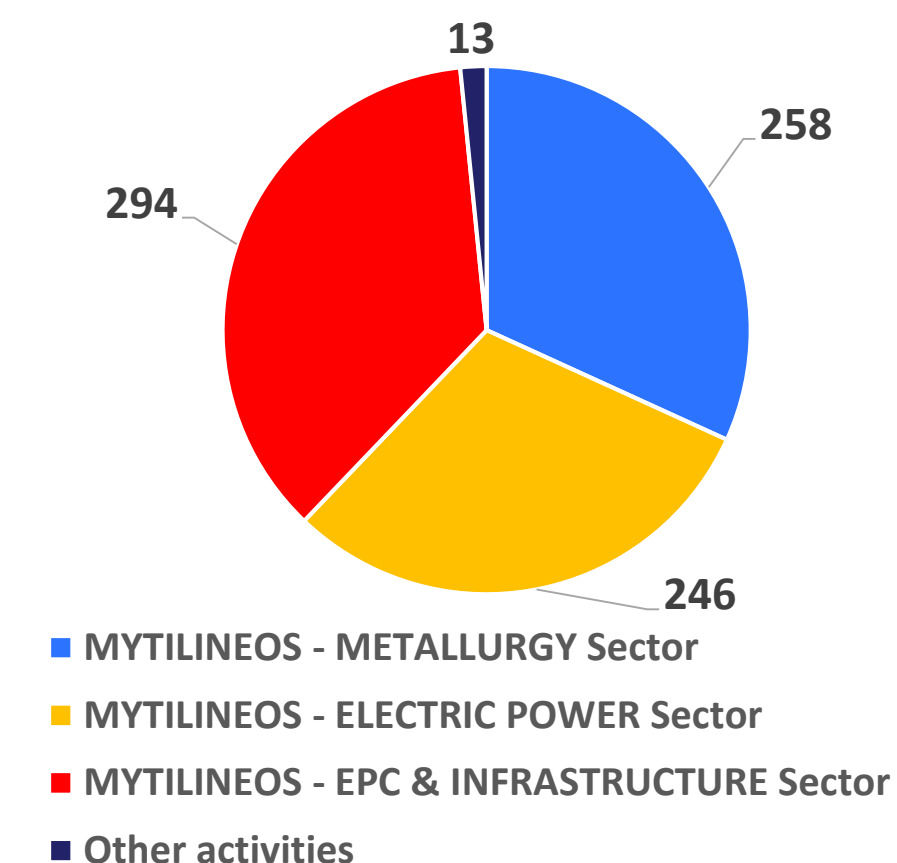
ENERGY
1.613 INDIRECT JOBS ARE SUPPORTED



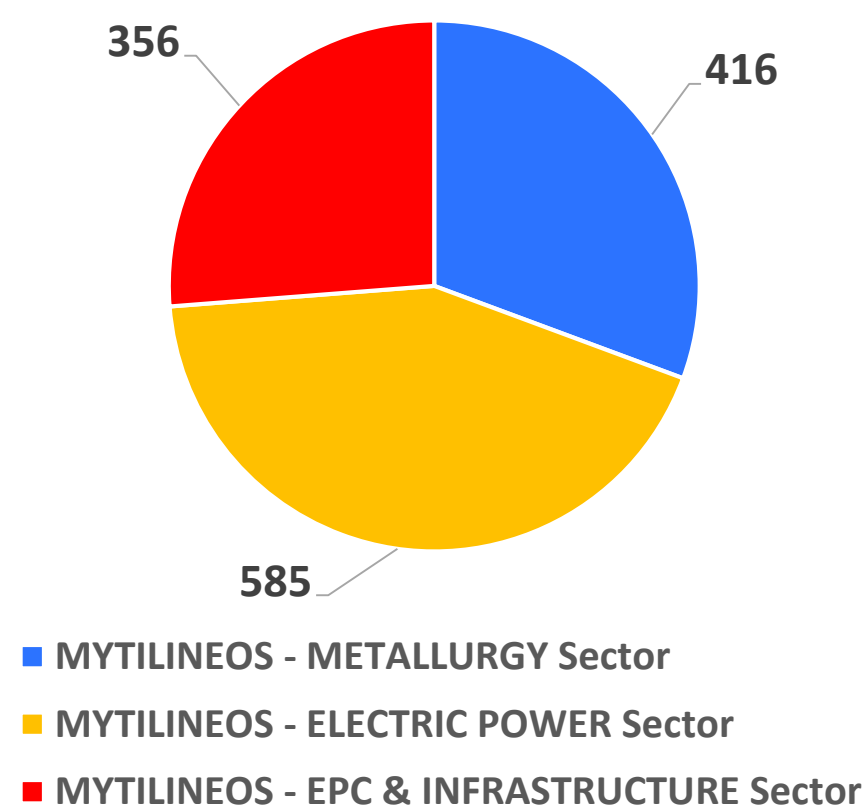
RETAIL
846 INDIRECT JOBS ARE SUPPORTED



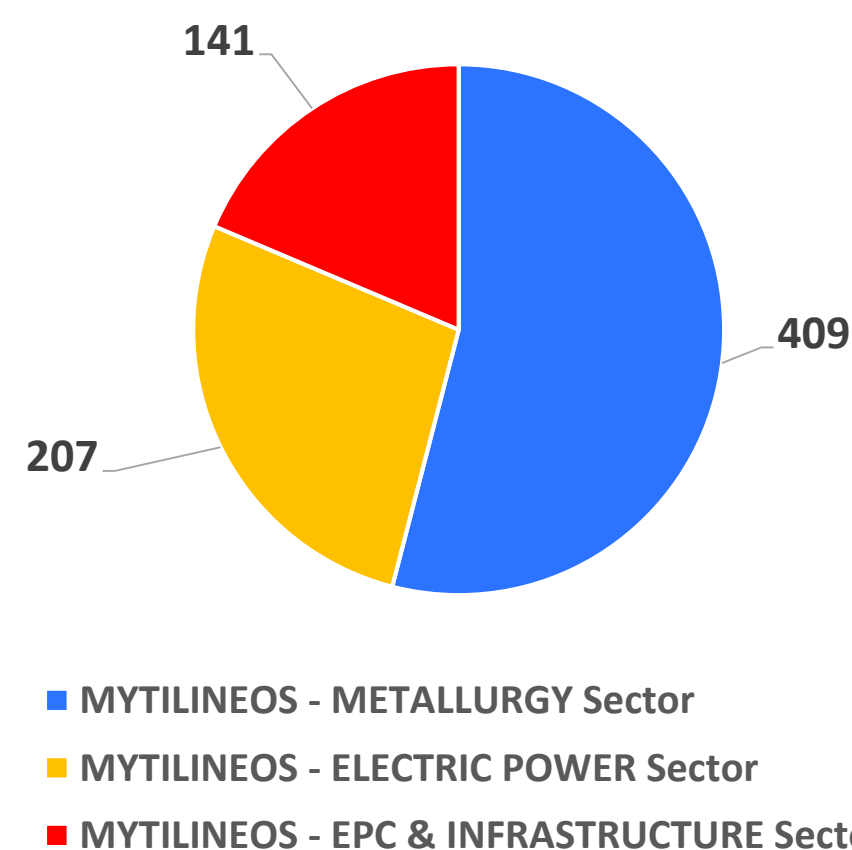
ARCHITECTS/ENGINEERS
811 INDIRECT JOBS ARE SUPPORTED



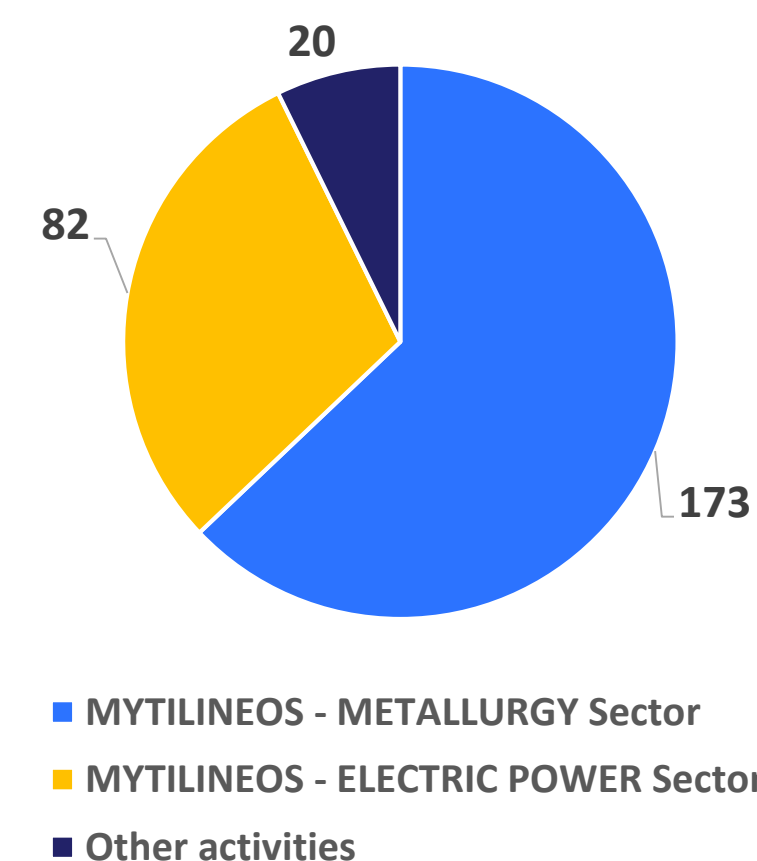
CONSTRUCTIONS
1.357 INDIRECT JOBS ARE SUPPORTED

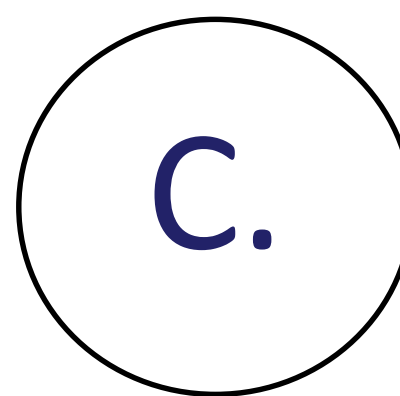


WHOLESALE
757 INDIRECT JOBS ARE SUPPORTED



FINANCIAL SERVICES
275 INDIRECT JOBS ARE SUPPORTED





MYTILINEOS BUSINESS ACTIVITY SECTORS CONTRIBUTION TO GREEK ECONOMY & DOMESTIC EMPLOYMENT



MYTILINEOS Socio-economic impact in Greece (2017)

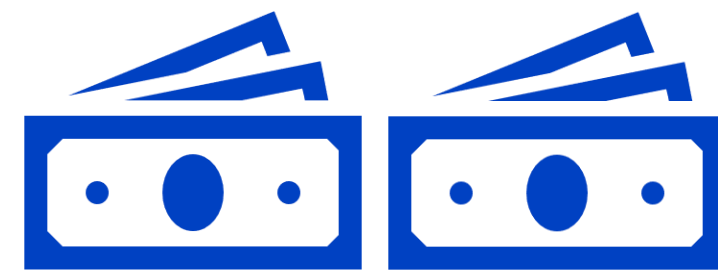
C.1.

METALLURGY SECTOR

✓ MYTILINEOS total added value in the Metallurgy sector corresponds to **30%** of the added value generated in total by the Metallurgy sector in Greece.

✓ The METALLURGY SECTOR has a significant contribution to employment since it covers **12%** of total employment in the Metallurgy sector in Greece.

✓ The METALLURGY SECTOR purchases from **Greek suppliers** amounted to **€399 mn.** Of this amount, €291 mn. regarded mainly electric power and gas suppliers.



The indirect and induced contribution of MYTILINEOS Metallurgy sector to the national GDP stands at

€323 mn.

Indirect
€257 mn.

Induced
€66 mn.

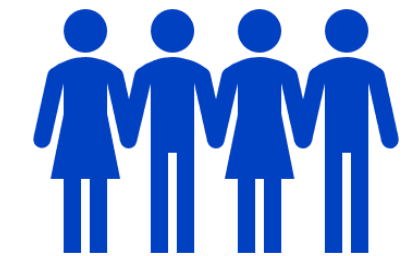


The indirect and induced contribution of MYTILINEOS Metallurgy sector in the Greek tax revenue amounts to

€108 mn.

Indirect
€86 mn.

Induced
€22 mn.



From the Metallurgy sector MYTILINEOS activity, supported in total

6,679 jobs

(direct, indirect and induced)

Direct
1,114

Indirect
4,025

Induced
€1,540



MYTILINEOS Socio-economic impact in Greece (2017)

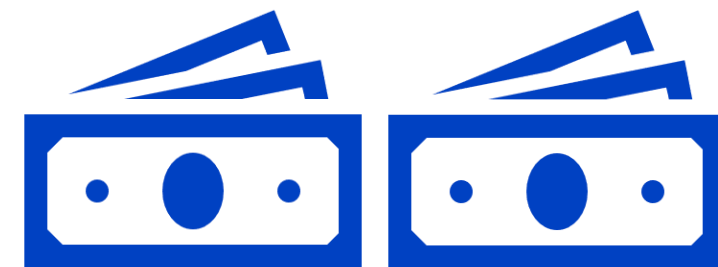
C.2.

ELECTRIC POWER & NATURAL GAS SECTOR

✓ MYTILINEOS total added value in the Electric power & Natural gas sector **corresponds to 8%** of the **added value** generated in total by the Electric power & Natural gas sector in Greece.

✓ The jobs supported by the ELECTRIC POWER AND NATURAL GAS SECTOR activity account **for 6%** of **total employment** in the Electric Power & Natural Gas sector in Greece.

✓ The ELECTRIC POWER & NATURAL GAS SECTOR purchases from **Greek suppliers** amounted to **€252 mn.** Of this amount, €198 mn. regarded mainly electric power and gas suppliers.



The indirect and induced contribution of MYTILINEOS Energy & Natural Gas Sector to the **national GDP** stands at

€199 mn.

Indirect
€165 mn.

Induced
€34 mn.

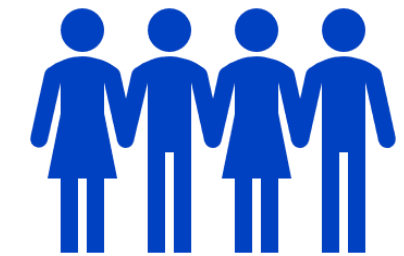


The indirect and induced contribution of MYTILINEOS Energy & Natural Gas Sector to the **Greek tax revenue** amounts to

€67 mn.

Indirect
€55 mn.

Induced
€12 mn.



From the **Energy & Natural Gas Sector** MYTILINEOS activity, **supported in total**

3,638
jobs

(direct, indirect and induced)

Direct
267

Indirect
2,579

Induced
792

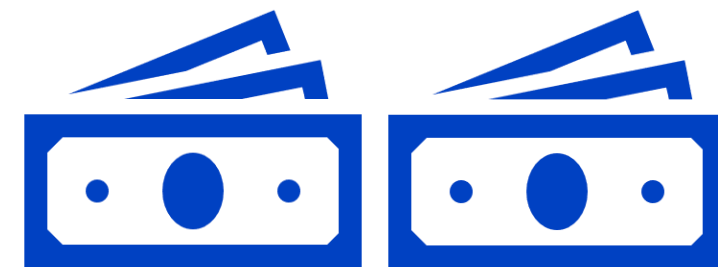


MYTILINEOS Socio-economic impact in Greece (2017)

C.3.

EPC & INFRASTRUCTURE PROJECTS SECTOR

- ✓ MYTILINEOS total added value in the Constructions sector **corresponds to 8% of the added value** generated in total by the Constructions sector in Greece.
- ✓ The jobs supported by the INTEGRATED PROJECTS & INFRASTRUCTURE SECTOR activity account **for 1% of total employment** in the Constructions sector in Greece.
- ✓ The INTEGRATED PROJECTS & INFRASTRUCTURE SECTOR purchases from **Greek suppliers** amounted to **€87 mn.** Of this amount, €37 mn. regarded mainly suppliers for constructions and maintenance.



The indirect and induced contribution of MYTILINEOS EPC & Infrastructure Projects Sector to the **national GDP** stands at

€82 mn.

Indirect
€58 mn.

Induced
€24 mn.

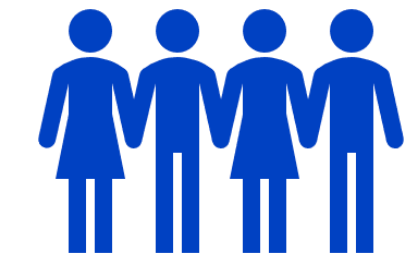


The indirect and induced contribution of MYTILINEOS EPC & Infrastructure Projects Sector to the **Greek tax revenue** amounts to

€28 mn.

Indirect
€20 mn.

Induced
€8 mn.



From the EPC & Infrastructure Projects Sector MYTILINEOS activity, supported in total

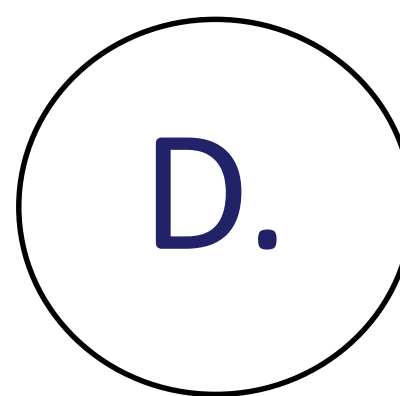
2,923
jobs

(direct, indirect and induced)

Direct
654

Indirect
1,718

Induced
551



SOCIAL & ENVIRONMENTAL RESPONSIBILITY



D.1 SOCIAL POLICY

MYTILINEOS, in the context of responsible operation, continuously pursues taking actions geared towards social contribution. During the last 8-year period (2010-2017), the company's spending of **more than €8.5 mn.** covered a broad range of social matters, responding to its role as integral cell of Greek society.

In 2017, MYTILINEOS continued applying its Social policy through a three-year Social Contribution Plan "IN PRACTICE" (2016-2019) contributing to services and development projects in local communities and broader society, with economic, human, material and technical resources.

The company's effort to align its business strategy with the new **Global Sustainable Development Goals** resulted in the corresponding adjustment of its social policy, enabling it to get stronger in its forms of cooperation with social bodies and to reinforce the value it creates at local and national level.



D.2 ALLEVIATION OF POVERTY & FOOD INSECURITY (GLOBAL GOALS 1 & 2)



**Total expenditure
of €80,000**

In 2017, MYTILINEOS created **95 new jobs** bringing the total job creation number to **665 over the last 8 years of economic slump while preserving more than 800 indirect jobs in its direct activities**. In parallel, it pursued a local employment boosting policy, a fact confirming that the company acknowledges and accepts the significant role apportioned to it in promoting growth and upkeeping prosperity of local communities, with the majority of its human resources **(87%)** coming from the local population.

Steadfast in supporting the vulnerable social groups, MYTILINEOS proceeded to the economic support of the families that joined 'AROGI' (ASSISTANCE) foundation of the Holy Metropolis of Thebes & Livadia, facing serious financial and health problems. The company's support intended to cover their daily subsistence needs. Furthermore, the company supported the operation of the Social Grocery in the Municipality of Karystos, while with its participation in the Crowdfunding program for Society and Economy of act4Greece initiative offered in total more **than 50,000 healthy hot school meals to pupils of elementary schools in Western Attica, Trikala and Kavala**, aimed at alleviating food insecurity; it thus covered **14.2%** of the entire initiative, as an additional support action, addressing on the one hand the food needs of pupils belonging to vulnerable social groups and on the other hand, reinforcing the educational process preventing school dropout phenomena. The meals were prepared in cooperation with the Limited Liability Social Cooperatives of Trikala and Kavala, offering additional benefits to local communities.



D.3. SUPPORT TO HEALTH INFRASTRUCTURE (GLOBAL GOAL 3)



**Total expenditure
of €80,800**

Ensuring healthy living conditions, access to health infrastructure and promoting prosperity for all in all ages are vital for sustainable development. Acknowledging the primary importance of access for all to qualitative health services, MYTILINEOS launched a cooperation, in the end of 2017, with the Charity "Pediatric Trauma Care". **Through this collaboration, the company aims to contribute to creating and upgrading the Emergency Departments at Health Centers and Pediatric Hospitals**, fixing as priority the local communities where it operates; this collaboration also aims at informing parents and teachers on pediatric trauma. This cooperation kicked off and was inaugurated via the company's contribution to upgrading the Emergency Department at the General Hospital of Larissa with diagnostic and surgical equipment.

Moreover, the company supported other important initiatives, such as the following: a) it contributed significantly to the reoperation of the Disabled Children Creative Entertainment Center in Maroussi that is hosting children with autism and mental retardedness, b) it reinforced the healthcare services in SOS Children's Villages, c) it supported the work of the Association for Neuromuscular Diseases δ) it undertook to repair an ambulance of Antikythira Municipality and e) it supported the work of volunteers associations, such as Floga, the Smile of the Child, White Butterflies and ELEPAP (Rehabilitation for the Disabled).



D.4. BOOSTING YOUTH INNOVATION AND ENTREPRENEURSHIP (GLOBAL GOAL 4)



**Total expenditure
of €365,620**

MYTILINEOS, turning its gaze to innovation and to new educational developments in order to create goodwill for the young generation, still living in the country, invests in youth innovation and entrepreneurship. In particular, in 2017, the company offered its support to the following:

.the institution of **Pan-hellenic Space Competition CanSat in Greece**, organized by the European Space Association (ESA). This organization intends to establish Greece in the European space competitions as well as to build a students' community that will turn to space technologies and will recognize the opportunities arising therefrom.

.The **"F1 in Schools" institution** carried out over the last 12 years now under the auspices of Formula One and constituting one of the most integrated **S.T.E.M. programs Education** (Science, Technology, Engineering, Mathematics) in order to entice students' interest in Natural Sciences, New Technologies, Engineering, Mathematics. The company supported financially the scientific paper by Omega Racing team, from the "Educational Renaissance" school that represented Greece in the final stage of the world championship "F1 in Schools" in Malaysia, in 2017, ranking 9th.

.Finally, MYTILINEOS economic and advisory support to the **Junior Achievement Greece (JA Greece), of SEV (Hellenic Federation of Enterprises)** aims at bringing youth closer to business mindset and action strengthening the business culture where it is mostly needed, in education. During the school year 2016-2017 only, a number of 8,810 students participated in totally 10 programs implemented by the body, while 95 virtual student businesses derived bringing closer the country's student community to creativity, innovation and team work.



D.5. BOOSTING QUALITY EDUCATION & YOUTH ENTREPRENEURSHIP (GLOBAL GOAL 4)



**Social value programs*
> €1.75 mn.**

Completion of the **"YOUNG GENERATION IN ACTION PROGRAM"** and of the 2nd cycle of the program **"ENGINEERS IN ACTION"**; such programs constitute an important route out for young people excluded from the labor market, offering 12 months of paid in service training in order to open up career paths, offering them the opportunity to stay in our country. According to the program's social value analysis put in place through the **international methodology Social Return On Investment (SROI)**, an initiative constituting innovation and leadership in the industry sector, the overall investment generated a social value with return indicator **SROI equal to 4,24:1**. This means that for **each 1 EUR invested in the "ENGINEERS IN ACTION" program, another 4.24 EUR of social value were generated, reflecting fully the advantages arising from such actions, contributing to an equal-opportunities society, in the context of sustainable environment.**

The completion of the program's second cycle **on combating school dropout, implemented by the 7th Municipal Community of Attica, "I'M IN" in cooperation with the Association "Together for Children"**. This is a program aimed at safeguarding students' educational route in completing the basic education, developing a powerful social solidarity network against educational and social exclusion. The program's second cycle yielded the following results:

- **It covered totally 57 students** (second and third grade of Lower Secondary School).
- **Twelve (12) new jobs were created** for 9 months, while 20 individuals from 4 different social bodies were employed in total.
- **40 hours of consulting sessions were held** by experts in school psychology in order to guide instructors teaching in the program.
- **A total of 1,026 hours of remedial teaching were completed.**
- **4,700 healthy snacks were offered**, along with stationery, school bags, consumables, new footwear and other commodities for all students participating in the program, throughout the year.
- **Moreover, 300 hours of psychological interventions were held** addressing children, teachers and parents
- **6 families** (of children participating in the program) joined **free lunch menu** program for 6 months (28 beneficiaries in total).

*Based on the international methodology Social Return On Investment (SROI),



D.6. SUPPORT TO LOCAL INFRASTRUCTURE (GLOBAL GOAL 11)



**Total expenditure
of €908,000**

In 2017, MYTILINEOS, contributing to the sustainability of communities where it operates and aiming at improving the living conditions of municipalities' residents, invested **387,876€** meeting the needs for local infrastructure and services, with direct public benefit such as: construction of children's playgrounds, school buildings upgrading, equipment of a municipal library and provision of materials for municipal projects etc. In parallel, individual partnerships between the company and local government, through its Activity Sectors are also important; for example, one such partnership is the cooperation between the Metallurgy Sector with Livadia Municipality in its community service program, where the company offers specific materials and economic resources to renovate public infrastructure, while at the same time employment is offered to our unemployed fellow citizens.

In addition, the added value being highlighted by the company's business operation, with the elaboration of Renewable Energy Sources projects, through the Electricity Sector is identified not only in the attainment of the national environmental objectives but also in the significant benefits towards the local communities. As a result, in 2017, the total investment in sponsorships, donations and infrastructure projects in Municipalities where new RES projects are running or are about to be elaborated exceeded **520.000€**.



D.7. TECHNOLOGIES DEVELOPMENT FOR BAUXITE RESIDUES MANAGEMENT (GLOBAL GOAL 12)



In the framework of circular economy and sustainable development, MYTILINEOS Metallurgy Sector has fixed as its objective to develop technologies that would enable a holistic utilization of bauxite residues through its participation in National and European research programs.

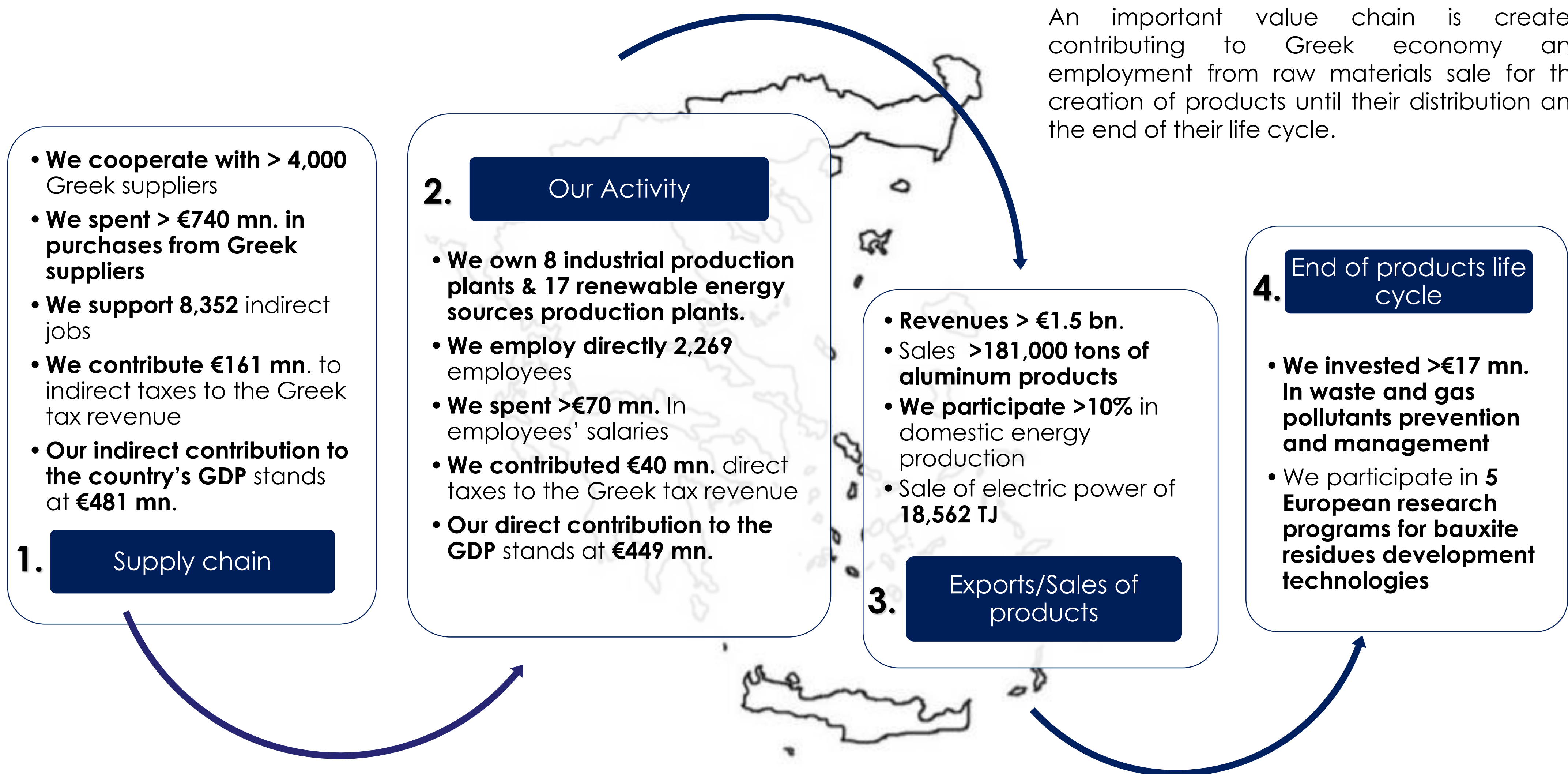
Within 2017, it launched the research project **SCALE** (Production of Scandium compounds and Scandium Aluminum alloys from European resources) aimed at **rare earth elements (REE) mining and in particular Scandium (Sc) compounds and Aluminum-Scandium alloys from European metallurgical residues, such as Bauxite residues**. In this program, of European budget at €7mn., the coordinator is MYTILINEOS Metallurgy Sector; the National Technical University participates along with 19 partners from 9 European countries.

Finally, in December 2017, the research proposal **RemovAL** was announced and approved (with excellent evaluation 14.5/15.0.), coordinated by MYTILINEOS Metallurgy Sector. The RemovAL program (Removing the waste streams from the primary Aluminium production and other metal sectors in Europe), will kick off in May 2018 and will last 4 years. Its total budget stands at €11.5 mn. and involves 27 partners including the largest alumina producers outside Asia (RUSAL, RIO TINTO, ALCOA) and the European Aluminium Association and the International Aluminium Institute. **The RemovAL program intends to try out at pilot level different technologies in bauxite residues utilization.**



MYTILINEOS Socio-economic impact in Greece (2017)

MYTILINEOS VALUE CHAIN AT A GLANCE





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