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# Greece: PELAN S.A. case study

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| Case study name: The greening of industries in the EU |  |
| Country:<br>Greece                                    |  |
| Organisation Size:<br>0-99                            |  |
| Sectors: Transport and storage                        |  |

PELAN S.A. was established in 2008 to handle waste in an environmentally advanced way. It was a landmark investment in the recycling sector of the Peloponnese, a relatively backward region in terms of established environmental practices. It is an interesting case as it differs from other sector companies in combining several varied activities: the collection and transportation of waste electronic and electric equipment (WEEE), end-of-life vehicle (ELV) recycling and solid industrial waste management.

#### Introduction

Recycling rates in Greece are still low in relation to the requirements of the EU and to environmental needs. Significant efforts have been made in this direction over the past decade. In terms of effectiveness, the distinguishing factor is the completion of the institutional framework legislation imposing the alternative management of packaging in waste, mineral oil, cars, batteries, electrical appliances, tyres, etc. The recent changes in legal framework and governmental policy have created an opportunity for green practice businesses.

PELAN S.A. is such a business. It collaborates with neighbouring industries, collecting material from their factories in its privately owned vehicles and transporting them back to its plant. Once materials have been divided into recyclable and non-recyclable, the former are processed through three different production lines, according to type, and are then exported for re-use or, in the case of non-recyclables, sent to landfills.

The company's uniqueness lies in the fact that, in contrast with other green companies situated in Greece, PELAN S.A. operates three different production lines and therefore encompasses a wide range of recyclable material. The management claims that PELAN is a recycling plant, and this concept is synonymous with ecological awareness. Several actions have been initiated both in the plant area and in the offices to increase energy efficiency (solar panels, installation of eco-bulbs). The enterprise's vehicles undergo regular inspections (Vehicle Technical Control Centres, exhaust control card), while the machinery is maintained so that it not only runs well but also saves energy. The premises are organised in such a way as to achieve minimum energy consumption; they reduce waste and re-use materials and tools or they recycle them if unsuitable for re-use. However, the economic crisis has made it almost impossible for PELAN S.A. to carry out further actions, including planning for the overall modernisation of its establishment (eco-construction).

PELAN S.A. was established in 2008, with the trade name Peloponnese Recycling – Recyclable Materials and Refuse Management Company. The company is active in three areas of operation: the collection and transportation of waste electronic and electric equipment (WEEE), end-of-life vehicle (ELV) recycling and solid industrial waste management. It has developed in a region which is among the worst in overall solid waste management in the EU.

The company is new to the recyclable material management sector. It was established in the midst of a hard-hitting economic crisis. The company's main difference from its competitors lies in the fact that it combines many varied activities which allow for the processing of different materials, in contrast with the normal practice in Greece where a recycling company is focused on the processing of a specific material. There are, for example, companies involved in the process and recycling of vehicle parts. However, PELAN S.A. decided from the start to provide a variety of recycling services for its business partners, 'speeding up' the process of management and re-use: ideally, PELAN S.A. can import all the material for any of its business partners, process these at its own plant and export them back for re-use without the need for a third party. This innovation has established PELAN S.A. as a pioneer in Greece. It is also worth noting that the company has managed, due to its technological expertise, to increase exports to 80% of the total materials it manages and has therefore doubled both its turnover and personnel for every year of operation.

#### Drivers and motivations

The company's shareholders decided to invest in the recycling sector in 2008 at a time when recycling in the Peloponnese region was still at a very early stage. More specifically, the region scored last place in Greece in relation to the targets set by the EU on recycling issues. Having an avid interest in the recycling sector, PELAN S.A. also had the technological and material availability in the form of experts as well as neighbouring industries that would supply the plant and later serve as an export destination. Other drivers were favourable governmental policy from the beginning of the new millennium, as well as the fact that the Peloponnese region also provided a business opportunity due to an absence of rival companies already operating. The company's proposals for partnerships were positively accepted as they were accompanied by a specific growth plan for every line of activity.

PELAN S.A. has made the observation of both domestic and European legislation especially on environmental issues its fundamental policy. Even though, initially, the company was formed to answer the need for re-usable materials going to and from the neighbouring industries, the CEO has affirmed that climate change was indeed the defining factor for 'turning green'. The possibility of increasing dependence on energy as well as a combination of cost and inefficiency in the transportation of personnel and materials alarmed the stakeholders who in turn took the decision of 'upgrading' their facilities. It is this turn towards green practices that has allowed PELAN S.A. to double its turnover as well as hiring additional personnel the two years it has been operating.

The negative financial climate, however, currently prevalent in Greece is, unquestionably, a huge threat for the growth of the company. Despite the difficulties placed by an ambivalent financial environment, PELAN S.A.'s intention to continue on its track is resolute and for this reason the company applied and has been approved for funding from the Ministry of Development's green infrastructures programme via the National Strategic Reference Framework (NSRF) in order to be able to continue its operation in the recycling sector. The approved proposal amounts to \$943,000 with a 35% company participation rate, 25% bank loan and 45% programme participation. It is currently in the process of locating a bank willing to finance and execute the project.

#### Green business practices

From the beginning, the company management's concern was to create a model recycling centre. So, in cooperation with environmentalists and their partner systems, it decided to determine the manner of collection, storage and processing of the materials that are delivered to the company's premises so as to minimise the environmental impact and to comply with the European legislation governing environmental issues. The decision to employ three different production lines was made by the board on the advice of the environmentalist expert contacted as well as to increase efficiency in one centralised model.

The production process is, naturally, different for every production line. The ELV production line is divided into three basic stages: collection and transportation, decontamination and disassembly. During the first stage of the production process the company collects the ELVs (using privately owned trucks) from their specified location. These relate either to private ELVs or abandoned vehicles in the municipalities with which the company collaborates. On arrival at the factory it moves onto the decontamination stage. Specialist mechanical equipment is used to collect all the liquids from the ELV as well as batteries and tyres. When this stage has been completed the ELV is ready either to be broken down into spare parts (which are mainly transported abroad) or for the vehicle to be stripped of all its recyclable materials. 90% of the components of a vehicle are transported as raw materials to final recycling factories such as steelworks and plastic processing plants.

For WEEE, the process is different. The company collects WEEE via collection bins (containers, plastic bins, cardboard boxes) which have been placed in collaboration with Appliances Recycling S.A. The company collects this waste using its privately owned vehicles. Collection points include shops which sell electrical and electronic equipment, municipal or public spaces (schools, public services, army camps, state organisations, etc.), as well as scrap metal collectors. The factory also operates as a collection point. On arrival at the company's facility, WEEE (which includes light bulbs), are divided according to appliance type. There are approximately 10 categories. Following classification, WEEE are transported to final disassembly plants.

The third and final production line relates to non-hazardous solid industrial waste. The company collects the waste from collaborating industries and transports it to its facility in special containers. Here the waste is separated into recyclable and non-recyclable. Non-recyclable waste is transported to landfills and recyclable waste is transported to final processing plants, mainly located abroad.

The company relies, to a great extent, on partnerships with other businesses. It collects materials from other companies, then separates, processes and classifies these materials for onward transmission to the final recipient companies.

In the current Greek financial environment, funding of any investment plan by domestic banks is impossible. Since 2008, PELAN S.A. has not had any access to bank funding despite the company being healthy, with continuous growth and chiefly exporting activities.

#### Anticipation and management of the impact of green change on quantity and quality of jobs

According to its CEO, the company began in 2008 with a driver and a worker. Today it employs six people. In the immediate future the company plans to employ four more workers, a driver and two administrative staff – one of whom will also have accounting duties.

Since PELAN S.A. is a new enterprise in the recycling sector, given that it began operating under conditions of climate change and the average age of the employees is under the age of 40, it was relatively easy for the company to conform to green practices without a cost in terms of jobs. In fact, the company states that more jobs will be created in the future, especially in the sector of dismantling end-of-life vehicles (ELV).

All the company's employees, from the moment they are hired, are trained (eco-driving training programme for the truck drivers, general training for plant workers) so as to achieve the best possible results under conditions compliant with the legislation governing recycling. Both the means of collection and transport and the machinery operated by the staff within the facility (workers, drivers) are compliant with the safety standards that PELAN S.A. applies and with the principles of environmental protection, as stated by the national and communal legislation (Ministerial decisions of 2004–2006, EU legislation on energy efficiency, etc.). In addition to the standard training provided, PELAN S.A. has participated in various seminars on green practices.

Regarding the staff's qualifications, the CEO and administrative employee have a tertiary education. The drivers have secondary-level education qualifications and category 5 professional driving licences, and the workers have secondary-level education qualifications. The staff have a low average age and all staff members have completed secondary education requirements, which is the norm for the sector in Greece. However, the workers have de-assembly specialisations which set them apart from unqualified workers. All employees – excluding the drivers – have attended seminars related to their work positions. As mentioned above, all the job positions and the qualifications are oriented towards the principles of environmental protection. The foregoing applied procedures are interwoven with the skills and the

knowledge of the staff, whether manual workers or not, but are also enriched through the participation of the staff in seminars that take place either in the working area or elsewhere.

All the company's human resources – management, workers, technical and scientific personnel, medium and highly qualified manpower-have green practices as their guiding principle. So, in addition to there being no differences in terms of working conditions as expressed in the National Collective Contract (the employment regime is full-time as per other sectors, the employees' wages are equal to the minimum agreed wage, provisions for family and stress issues are observed), the management's primary goal is to ensure a healthy, safe and humane work environment for its employees. According to PELAN's CEO the company will make a positive contribution to employment in the area in future because it is a labour-intensive company, which is rapidly increasing the need for more workers.

In a relatively short period of time, PELAN S.A. signed partnership agreements with Greek Alternative Vehicle Management (EDOE) and Appliances Recycling S.A. Specifically, PELAN S.A. is EDOE's partner in the Peloponnese. With Appliances Recycling S.A., the partnership includes the development of a network, the collection and transportation of WEEE and, finally, the sorting and storage of WEEE at its reception centre. All of the above are the exclusive contracts of PELAN S.A. for the prefecture of the Peloponnese. In addition it collaborates with the region's largest industries for the collection of industrial and commercial waste, and with most of the regional municipalities in recycling activities.

In the current Greek financial environment, however, funding of any investment plan by domestic banks is impossible. This will have a strong impact on future plans for further implementing green practices (eco-construction, further energy efficiency practices, etc.). Since 2008, PELAN S.A. had not had access to bank funding although the company is healthy, growing and engaged chiefly in exporting activities. However, recently the company applied and it has been approved for funding from the Ministry of Development's green infrastructures programme via the National Strategic Reference Framework.

#### Conclusions and recommendations

As the company has only been operating for a few years in a new field by Greek standards, any conclusions concerning policymakers and other actors involved in better anticipation and management of socially responsible green change would be precarious. Undoubtedly, PELAN's well elaborated business plan as well as its systematic steps towards the introduction and management of green change makes it a good practice case for the policymakers. At the same time guarantees a great potential for future development and growth.

However, it should be mentioned that the financial crisis is without doubt affecting the sector. Instability is a deterrent for new investments and contributes to the lack of funding. PELAN S.A. does, however, have a solid base and by turning to overseas markets and by participating in a growing and developing sector is able to look to the future with confidence and optimism.

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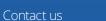












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