

**ΑΛΕΞΑΝΔΡΕΙΟ ΤΕΧΝΟΛΟΓΙΚΟ ΙΔΡΥΜΑ  
ΘΕΣΣΑΛΟΝΙΚΗΣ  
Σχολή ΣΔΟ  
Τμήμα Λογιστικής  
Καθηγητής: ΓΚΙΟΥΡΗΣ ΘΕΟΔΩΡΟΣ**

**ΠΑΧΗΣ ΑΡΙΣΤΕΙΔΗΣ**



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# CHAPTER 1

## CORPORATE INFO

### People

Board of directors of Heracles General Cement Co.

Manolis Chris Kyprianides	Eric Meuriot	Saab Sebbar
Chairman of the BoD	Vice Chairman	Managing Director

Jean Charles Blatz	Ulrich Glaunach	Jean Jacques Gauthier
Member	Member	Member

Albert Corcos	Christos Sorotos	Agissilaos Karambellas
Member	Member	Member

## CHAPTER 2

### FINANCIAL

#### Live Share Price

The capitalization of the debts of «HERACLES» General Cement Company was decided on August 1986.

The shares of the Company which were 4,614,957 up to then, were increased and in the beginning of 1987 were 50,490,957.

On February 13th, 1995 the shares of the Company were converted from unregistered to registered , according to the provisions of the Law (article 24 of the law N. 2214/1994). Then on June 2nd , 1999, the shares were converted from titles in hard copies to dematerialized (law N. 2396/96 as amended).

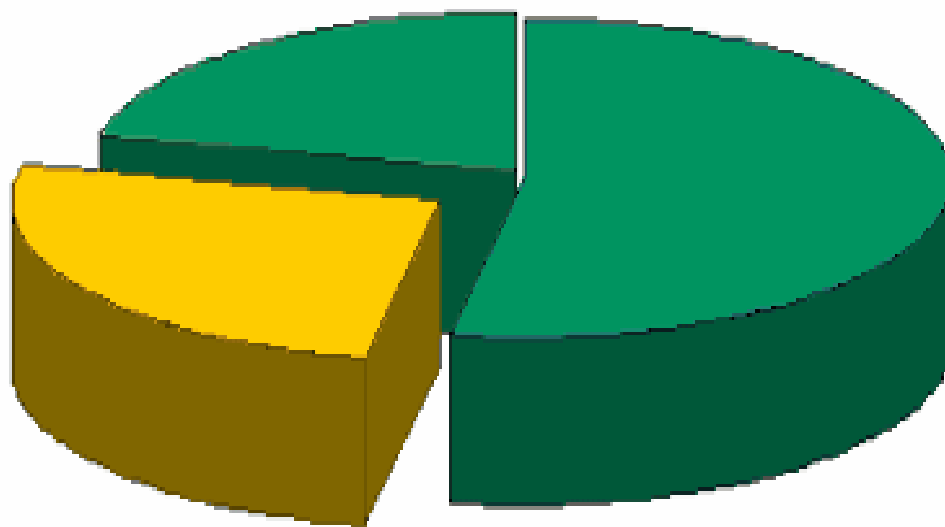
Following the merger of HERACLES GENERAL CEMENT CO S.A., HALKIS CEMENT CO. S.A. and HALKIS CEMENT TRADING CO. INC., which was approved by the Ministry of Development on February 13th, 2001, the resulting deletion of the shares that the first company had in the second as well as the exchange rate of the old shares of the above companies with the new ones of AGET HERACLES, the number of shares now becomes 71,082,707.

In an Extraordinary General Assembly of AGET Heracles held on December 18th , 2001, the shareholders of the company (including the previous Halkis

shareholders) decided the reduction of the share capital by GRD 29,516,738,668 by reducing the nominal value of the shares and the conversion of the subsequent nominal value to Euro. The reduction of the share capital was necessary in order to eliminate retained losses in the merged Heracles/Halkis balance sheet. This reduction is a purely technical financial action that does not reduce either the value of the Company or the value of its shares.

Share Price (in Euro)      31/08/2007      HPAK: 16.70 / 0.60%

Share 's Distribution



<b>BLUE CIRCLE INVESTMENTS S.A.</b>	<b>52,70%</b>
<b>LAFARGE CEMENTOS S.A.</b>	<b>26,00%</b>
<b>OTHERS</b>	<b>21,30%</b>

## CHAPTER 3

### OPERATIONS

#### Headquarters

HERACLES headquarters are located 15 km away from the center of Athens, in Lycovrissi, Attica. The construction of the building was completed by January 1975 and from the fall of the same year, most employees were transferred there from the Athens offices.

The headquarters were built under the directions of the famous architect Alexandros N. Tombazis and at that time, they were considered one of the top office buildings in the whole area of the Balkans. The total surface of the building is approximately 10000 m<sup>2</sup> and is comprised of one basement, a ground floor with mezzanine and three upper floors.

Unpainted fairfaced concrete characterizes most of the building's surfaces. Inside there is room for 500 workplaces. The detailed design of the interior layout, accommodating the human factor, facilitating work flow and meeting European Standards, was entrusted to a Swiss design team, Thorc Ltd. The concept used was that of a totally flexible open plan office building. The result was exceptional working conditions in an almost ideal office environment.

Within the same building, several of HERACLES Group subsidiaries are also housed.

## Production Units

Information concerning production units

The HERACLES Group now comprises 3 cement plants with advanced technological equipment coupled with extensive and high-output port installations.

The plant of Volos is one of the largest cement factory in Europe and one of the largest in the world. It is situated just 4 km away from the city of Volos on the road to Agria.

Production of cement started in 1925.

There exist 4 rotary kilns in operation and the annual production of clinker and cement amounts to 3,3 million and 4,3 million tons respectively.

The annual sales of the plant reach approximately 4,8 million tons (for cement and clinker). A significant portion of the production is exported. All the cement qualities and types are available including white cement.

The port of the Volos plant can serve the loading of vessels of up to 40000 DWT. The plant is ISO 9001 assured and in the immediate future will also be ISO 14001 certificated.

The plant of Milaki is a prototype as far as production technology, integrated automation of processes and port installations are concerned.

It is located in Milaki, in the island of Euboea, 5 km away from the city of Aliveri. Production started in 1983.

The annual production of the plant for clinker and cement is 1,6 and 1,7 million tons respectively.

More than 90% of the production is exported. All cement types and qualities are available.

The plant's port can accommodate the loading of vessels of up to 65000 DWT. Additionally, the unloading of vessels of coal of up to 160000 tons is feasible. The plant is ISO 9001 and ISO 9002 assured.

The plant of Chalkida is situated in Mikro Vathi Avlidas, 3 km from the city of Halkis.

From the 2 rotary kilns in operation , approximately 2,5 million tons of cement are produced annually.

The production as well as selling of cement are ISO 9001 certified. The certification with the environmental management system ISO 14001 is proceeding.

HERACLES products are available in the domestic market, in the major European countries and in the US followed by quality signs (EAOT, BSI, AFNOR, ICITE, BAM, IPQ, DTI). For all these standards it has developed its own expertise in the production process, the distribution and the transportation of cement.

### Cement Production Process

Cement is a finely grinded material which develops various strengths throughout its hydration process. A great variety of raw materials (such as limestone



and siliceous ones) are utilized for its production. It is a must that the chemical compositions of these raw materials fulfill certain specifications.

The production process of cement entails the stages as follows:

Raw Meal Production

Clinker Production

Cement Production

Raw Meal Production

The raw materials transported to the Plant undergo crushing with the help of huge crushers and then are either stored separately, or they are directly driven to prehomogenization piles. Next, via a fully automated system, comprising weighing devices of high accuracy and conveyor belts, the crushed raw materials are driven into the mill (roller mill or ball bearing mill) for further fine grinding.

The output, labeled as «raw meal», is stored into special silos for the homogenizing process, which is carried out with the help of blowers installed at the silos' bottoms. Next, the raw meal is taken to the storage silos wherefrom it is driven to the silos for the feeding of the Rotary Kiln, where the intermediate output, called «clinker», is produced.

## 2. Clinker Production

For the production of one ton of clinker around 1.6 tons of raw materials are utilized (70-85% limestone, 10-20% shale etc.) and over 0.1 ton of coal.

Rotary Kilns are cylindrical in shape and they are made of some special alloy of 70-120 meters in length and 3-5 meters in diameter. Refractory bricks of special

fabrication are used for the Rotary Kiln lining.

With the usage of cyclon system and a limestone grinder, the raw meal, prior to its feeding into the Rotary Kiln, undergoes thermal processing at 900 degrees C. The Rotary Kiln temperature is gradually raised up to 1400 degrees C and its final output, which is in granular form, is the result of the chemical decomposition of  $\text{CaCO}_3$  and of the alumino-silicate compounds and the result of chemical reactions between CaO and the oxides of Si, Al and Fe which are thus produced.

### 3. Cement Production

The final stage in cement production is the co-grinding of clinker with 3-5% gypsum either with or without some other natural or artificial raw material (pozzolans, fly-ash, slag), which help improve some of the properties of concrete. The addition of gypsum is necessary for the slowing-down of slump formation during the cement hydration process.

The aforementioned raw materials are added at specified proportions which are controlled by an automation system .

It is in the cement mills, which are made of metallic cylinders, containing several tons of grinding media, that the grinding process takes place.

The final product is stored in large silos wherefrom it is distributed by the usage of various means (e.g. silo-trucks, vessels, in bulk, eta).

## Distribution Centers

In an effort to approach the market in areas which are remote from the production plants as well as in order to offer a better service to customers, the Company takes advantage of its seven distribution terminals within Greece. The geographic areas which are covered by each distribution terminal and the respective delivery system, are mentioned below:

### DRAPETSONA

It supplies the prefecture of Attica, Viotia, the region of eastern Peloponnese and the Cyclades islands with bulk cement of the types II35, II45, I45, IV55. In addition, 50 kilo sacks with cement type II35 are being packed and put in palettes.

### THESSALONIKI

It supplies all the prefectures of central Macedonia with bulk cement of the types II35, II45 and I45. Additionally, 50 kilo sacks with cement type II35 are being packed and put in palettes.

### KAVALA

It supplies all the prefectures of eastern Macedonia and of Thrace with bulk cement of the types II35 and II45.

### RIO

It supplies all the prefectures of west Peloponnese and the island of Lefkada with bulk cement of the types II35 and II45. Additionally, 50 kilo sacks with cement type II35 are being packed and put in palettes.

## HERACLIO, CRETE

It supplies all the prefectures of Crete with bulk cement of the type II35 and packs sacks of 50 and 25 kilos with cement type II35, putting them in palettes.

## IGOUMENITSA

It supplies all the prefectures of Epirus and the island of Corfou with bulk cement of the types II35 and II45. In addition, 50 kilo sacks with cement type II35 are being packed and put in palettes.

## RHODES

It supplies all the island of Rhodes and Kos with bulk cement of the type II35.

AGET companies

Sector: Production and Trading of Ready Mix



This activity is carried out by Lafarge Beton, which secures the presence of the Group in the ready mix sector throughout the country.

Sector: Construction



EVIESK S.A. specializes in metal constructions and industrial works as well as in the maintenance of industrial equipment.

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Sector: Mining - Quarrying



[LAVA Mining & Quarrying Company](#) is active in mining and distribution of pumice stone, gypsum, pozzolan, silica and aggregates.

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Sector: Information Technology



This activity is carried out by [AMBER S.A.](#) which produces integrated industrial automation systems for the control of production and sells services for planning, developing, implementing and maintaining software for trade applications.

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Sector: Research and Development



[HELLENIC CEMENT RESEARCH CENTRE LTD](#) carries out research and studies concerning the planning, growth, quality control and technical improvement of cement, ready mix, raw materials and building materials. In addition, it develops new products and construction materials. It also operates as a consultant for the quality control of large projects (works) as well as a consultant for the acquisition of the Quality Control Certificate ISO 9000.

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Sector: Transportation



Heracles Shipping Company S.A. is concerned with the sea transportation of bulk cement, coal and raw materials worldwide with HERACLES Group - owned specialized vessels. Transportation of bulk cargoes. Shipping, chartering, management, consultancy and programming.

## CHAPTER 4

### HISTORY

#### Major Landmarks

##### Major Landmarks in the history of AGET HERAKLES

1911: Establishment of the company by: Georgios Zavogiannis, Dimitrios Zavogiannis, Nikolaos Zavogiannis, Dimitris Zamanos, Efstathios Iatridis, Spilios Agapitos, Anastasios Stamatiades, Georgios Vrizakis, Spyridonas Fokas Cosmetatos. The initial name of the company is Industrial and Commercial Company Ltd «General Cement Company» based in Athens.

The first plant with the name «HERACLES» is erected in Drapetsona in Pireaus with an annual productive capacity of 2000 tons.

1917: Andreas Hadjikyriakos is appointed Chairman of the board.

1919: The shares of the company are quoted on the Athens Stock Exchange.

1929: Merger of the Company with Volos Cement Company Ltd «OLYMPOS», which possessed the plant in Volos, built in 1924.

The new name of the company becomes «General Cement Company Ltd».

1939: Alexandros Tsatsos is appointed Executive Director.

1951: Alexandros Tsatsos is appointed Managing Director of the Company.

1952: The plant in Drapetsona receives a subsidy from «Marshal plan» and its total productive capacity, with 2 rotary kilns, amounts to 1000 tons daily.

1959: Alexandros Tsatsos is elected to be the Chairman of the board as well as Managing Director.

1962: Modernization of Drapetsona plant and doubling of its production.

1964: Initial operation of Thessaloniki distribution terminal.

1965: Initial operation of Rio distribution terminal in Patras.

1966: Initial operation of Igoumenitsa and of Kavala distribution terminals.

1967: Initial operation of Heraclio distribution terminal in Crete.

1969: Installation of the first electronic data processing system in the Company in the headquarters in Dragatsaniou street, downtown Athens.

1970: Alexandros Tsatsos becomes the first and the only greek to date to be elected president of CEMBUREAU for a service period of three years.

1973: Initial operation of Rhodes distribution terminal.

A permission is given for the erection of a new plant in Methana (Triton project) with a projected budget of 1,4 billion drs and with a productive capacity of 4000 tons daily. Purchase of mechanical equipment and temporary storage in Keratsini.

1974: Suspension of the permission concerning the plant in Methana. Transportation and installation of the mechanical equipment in Volos plant.

1975: Opening of the Company's offices in Lycovrissi, Attica.



1977: Change in the name of the company to «HERACLES General Cement Company Ltd».

1980: Creation of distribution terminals in Egypt.

1981: The Drapetsona plant operates exclusively as a distribution terminal.

1982: The Company changes base from the municipality of Athens to Lycovrissi, Attica. Operation of the «OLYMPOS» plant in Volos with coal (steam coal and pet coke) as the main fuel.

1983: Opening of «HERACLES II», the company's new plant in Milaki, Eboea. Change in the Company's administration (departure of Tsatsos family).

1984: Close down of the distribution terminals in Egypt, due to the creation of local domestic cement production units.

1986: The Company goes under the provisions of the Law 1386/1983 and now belongs to the broader public sector

1992: Transfer of 50,5% of the Company's shares to CAL-NAT .  
(CALCESTRUZZI SpA. - NATIONAL BANK OF GREECE)

1995: Nominalization of the Company's shares.

1996: The Company buys out the Halkis Cement Group.  
Clearance procedure for CAL-NAT and distribution of the AGET shares it possessed (50,5% of total) to CONCRETUM company with 38,5% and to the NATIONAL BANK OF GREECE with the remaining 12%.

2000: Transfer of 54,48% of the Company's shares to the English Group BLUE CIRCLE INDUSTRIES.

2001: Completion of the merger procedures of the companies AGET HERACLES, HALKIS CEMENT CO SA and HALKIS CEMENT TRADING CO INC through absorption of the second and third by the first company. The name of Halkis plant now becomes «HERACLES III» plant.

Sale of the subsidiary HERACLES PACKAGING SA.

Acquisition of BLUE CIRCLE INDUSTRIES plc by LAFARGE.

Issue of new shares and exchange of the shares of HALKIS CEMENT CO SA with shares of AGET HERACLES.

## **CHAPTER 5**

### **ENVIRONMENT**

#### Environmental policy

Concern for the environment is an integral part of the HERACLES Group business policy. It constitutes an inseparable part of the overall economic framework with which the Group operates, and is a fundamental administrative component of all its management systems and activities.

HERACLES aim is to:

Comply with all applicable environmental legislation and regulations.

Continuously improve its environmental performance.

Contribute to long-term economic, environmental and social sustainability.

For this purpose HERACLES:

Assigns environmental responsibility throughout the Group.

Integrates environmental considerations into business decision-making at all levels.

Implements environmental management systems at all manufacturing sites.

Sets site-specific objectives and targets for each of its units in order to control and reduce impacts on all environmental receptors.

Promotes improvements in energy efficiency and the use of natural resources in all its units.

Is constantly improving the aesthetic appearance of all its units.

During production, utilises the by-products or waste resulting from internal or external sources, thus paying due attention both to product quality and the overall impact on the environment.

HERACLES manages its products in a responsible way and encourages customers to do the same.

HERACLES communicates openly and consults with stakeholders on environmental issues and informs its suppliers and subcontractors of its views about the environment, encouraging them to apply similar policies of their own.

HERACLES develops procedures for the prevention of environmental incidents and draws up preparedness plans to respond to emergencies, thus minimising any hazard to the environment.

HERACLES ensures that its environmental policy is implemented by familiarising, training and educating its staff and urging them to work in an environmentally responsible manner.

In the belief that access to information is a significant medium for environmental progress, HERACLES is willing to share non-proprietary environmental know-how with other companies and organisations.

HERACLES reviews its Environmental Policy annually and updates and re-issues it as required.

## Environmental report

Implementation of an efficient environmental policy constitutes nowadays the main lever of development and competitiveness. The fundamental environmental principles of Heracles Group, as well as of its parent company Lafarge, are summarised into six commitments:

- To contribute to long-term economic, environmental and social sustainability.
  
- To continually improve the environmental performance of all sites.
  
- To implement proper environmental management systems and to reduce environmental impacts.
  
- To integrate environmental considerations into business decision making at all levels.
  
- To train its employees to achieve high standards of environmental performance.
  
- To communicate openly and consult with stakeholders on environmental issues.

## Environmental management

The Group has done major steps in environmental management and performance during the previous years. Heracles Group does not stop short at complying with legislative and societal requirements. Having the ambition to be a leader in environmental performance the Group moves always a step ahead responding to the expectations of society.

Believing that environmental protection depends greatly on the organisation of a business and is an integral part of every activity, the Group implements environmental management systems at its installations and controls their

environmental impacts effectively.

Every company in the Group has set and assigned specific environmental responsibilities to one of its top managers. Similar responsibilities have been set at production level in every activity. These procedures ensure that top priority is given to environmental issues and that these are taken into consideration along with other factors during decision making.

Environmental impacts are controlled using specific programmes in every company. Key environmental performance indicators include energy, usage of water and packaging materials, use of alternative raw materials and fuels, emissions of dust, sulphur dioxide, nitrogen oxides and carbon dioxide, as well as waste generation. Each activity has defined specific objectives and targets to improve its performance indicators, which are systematically observed and controlled.

### Environmental investments

Heracles Group, which is active in many sectors, has proven in practice that economic progress and environmental protection not only they do not conflict but can keep up with each other in the framework of sustainable development.

In order to achieve this target, 15% of Group's investments was allocated for the protection of environment over the last ten years. 45% of the projects carried out in the period 2001-2003 are environmental. Particular importance is given to the abatement of low level pollution from fugitive dust by constructing closed storage areas for clinker and raw materials.

## Atmosphere

Reduction of air emissions constitutes an important factor for the operational success of the Group and its contribution to sustainable development. To this effect, the company has set strict targets and criteria, which form the basis for further improvement.

Particulate emissions are controlled by best available techniques. 24 electrostatic precipitators and 270 bag filters have been installed and operate at the three cement plants. Comparable infrastructure has also been set up at other installations of the Group.

The three cement plants, participating in an effort to conserve non-renewable natural resources and reduce carbon dioxide emissions that cause the greenhouse effect, have decreased their energy consumption per ton of clinker by 6% in the last ten years.

Towards the same target, cement production valorises by-products or waste-derived materials from internal and external sources, paying particular attention to the quality of production and the overall environmental impact. These materials substitute raw materials or clinker and reduce the emissions of carbon dioxide by 10-20% depending on the type of cement produced.

## Greenery

Efforts are not confined only in technological improvements. Special attention is given to quarry restoration and aesthetics at the Group's units all over the country, with the professional guidance of an expert forester - landscape architect.

The first tree was planted in the limestone quarry of Volos plant in 1977. More than 325.000 plants have been rooted so far in quarrying areas and the Group's

facilities all over Greece.

The Group has also developed a nursery for trees and bushes in Volos. It covers an area of 350m<sup>2</sup> and produces 30.000 plants annually, which are transplanted at the Group's quarries. A smaller nursery exists also at Thessaloniki concrete plant furnishing the requirements of local concrete units.

The Group finances and participates in the voluntary reforestation programmes of the Ministry of Agriculture, as well as the fire protection programme of Pilio Mountain. After the disastrous forest fires at Evia island in 2000, a 50.000 square meters area of burnt forest was adopted in Kymi and was planted with 10.000 trees. A watering system was installed and the Group has undertaken the care and support of the trees for three years.

Heracles Group donated old cement silos retrofitted into water tanks to the Prefectures of Magnesia and Evia in order to assist in the protection of forest resources and to reinforce the efforts of the Fire Brigade in the two areas. The 20 water tanks were installed at Pilio Mountain and the islands of Evia and Sporades.

## Sea

In the framework of its environmental policy, the Group is also committed to protecting the sea and marine environment from pollutants. Specific procedures impose adherence to strict environmental measures and all marine vessels used by the Group are certified according to the International Safety Management system. In addition, regular drills are conducted providing a safeguard against potential situations, which could result in polluting the water.



## **Health and Safety**

### Health and Safety policy

Lafarge is committed to providing a healthy and safe work environment for its stakeholders and to conducting its various businesses in a safe manner. Health and Safety are core values that must be incorporated into all aspects of our business.

We integrate health and safety objectives into our management systems at all levels of the Group. Management is accountable for the prevention of injuries and occupational illnesses.

Everyone working for Lafarge expects a safe and healthy work environment, and in turn, we expect everyone to contribute to that safe environment through responsible behaviour.

Everyone is also expected to demonstrate that Health and Safety are core values through visible commitment and active engagement of each other.

### Health and Safety rules

RESPONSIBILITY: Line management is responsible for Health and Safety implementation, communication and compliance.

TRAINING: Employees, managers and contractors must be trained to work safely and manage Health and Safety in their area.

EVERYONE: Everyone working for Lafarge, including contractors, must respect Health and Safety rules.

IMPROVEMENT: All units must have an annualized Health and Safety improvement plan as part of the Performance plan.

ORGANIZATION: All units must have a Health and Safety committee, composed of managers and relevant experts and partners.

COMPLIANCE: All units must comply with the Group Health and Safety standards.

REPORTING: All incidents and accidents must be reported at the appropriate level, investigated and learning shared.

TRANSPARENCY: Safety results must be visibly communicated to everyone.

MEASUREMENT: All operations must be regularly audited against the Group policy, Health and Safety and Management Systems and Standards.

SUPPORT: Health and Safety Organization must be resourced and trained to provide support to the line management.

CONDITION OF EMPLOYMENT: Compliance with these rules is a condition of employment and a criteria for a career development.

## CHAPTER 6

### COMMUNITY CONTRIBUTION

#### HERACLES' Annual Calendar

HERACLES calendar circulated for the first time in December 1953, for the year 1954, with engraved works of A. Tassos and caused a stir in the artistic publishing circles and art fans. From then on, and for many years, it had a prominent place in artistic publications, presenting each year a succession of paintings by one artist which comprised new work, commissioned by the Company. This was, and continues to be, one of the biggest advantages of this calendar, to present that is, each year a completely new and unpublished work of the artist, in contrast with other artistic calendars which presented reproduced old works.

As the years went by, the HERACLES calendar became known also abroad and thus today, as the old calendars are rare and hard to find, has become a collector's item.

#### HERACLES' Programme

In 1996, the Company took the decision to finance an architectural-town-building program, the so called «HERACLES Program». The Company invited ten prominent architects, Greek and Italian, to study from within contemporary town-building plans the uniqueness of the greek city, aiming at an integrated modernization and taking into consideration the historical memory of the location and the social surroundings. Upon completion, the «HERACLES Program» was presented in

exhibitions with simultaneous organization of conferences/meetings, in Greece and abroad. In 1997, in Athens, in 1998 in Mytilini and Thessaloniki and in 1999 in Volos, Hania and Patras, while in 2000 in Ankara (Turkey) and in Delft (Netherlands).

Common ascertainment was that all the meetings were successful, the proposals captured the interest of the crowd who attended and all the references to the problems of the particular areas will definitely contribute to planned or executed works of city-planning upgrading.

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