INNOCHEM Project
Innovating Education of Talents in Chemistry for
Business Success in SMEs' Innovations

SME & NEEDS FOR INNOVATION FROM THE POINT OF OWNER'S VIEW

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COVERPAINTS A. TROMPETA PAINTS & CHEMICALS

CONFERENCE
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OUTLINE

- COVERPAINTS Description
- The paints market in Greece
- Production procedure
- Skills needed in the coatings sector
- What Chemical Engineering School offers
- Needs for innovation

COVERPAINTS HISTORY

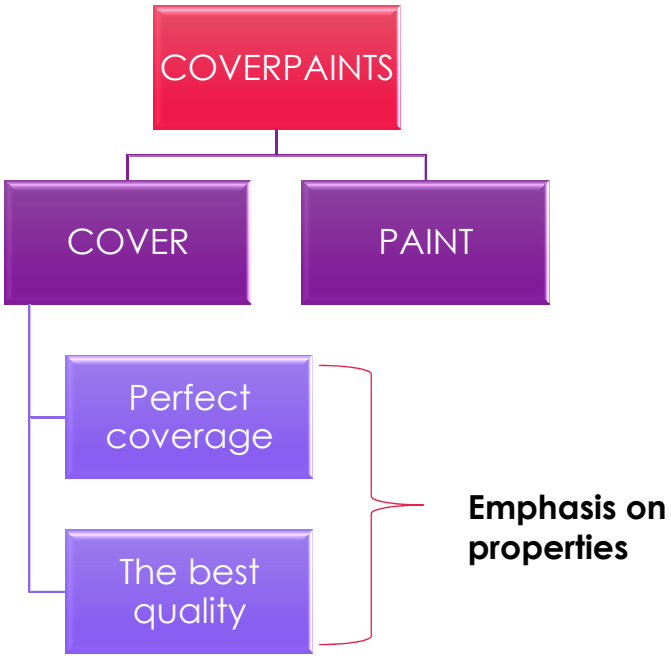
- The history of COVERAINTS holds since 1980.
- The first factory was built and operated in the industrial area of Volos (Central Greece) by the name PERFECTA S.A.
- In 1990 PERFECTA S.A. was purchased by Chrotex S.A.
- After that, A. TROMPETA was established in Athens as a family business.
- In 2000 A. TROMPETA was renamed to COVERPAINTS.
- Now COVERPAINTS is located to the Industrial Area of Attiki, Aspropyrgos.

COVERPAINTS LOGO

- COVERPAINTS logo is an **angel** with a **trumpet**.
- The instigator of this company is **Angelos Trombetas.**
- All Trompeta's family has as initial letter for their first name, the letter "**A**".
- Specifically:
  - **A**ntonios
  - **A**ikaterini
  - **A**glaia
  - **A**ngelos
  - **A**ikaterini (Kate)

Angel

COVERPAINTS BRAND



List of products:

- COVERLAC
- COVERPLAST
- COVERMUR
- COVERDUR
- COVERCRYL
- COVERSATIN
- COVERCRYLAN
- COVERROOF
- ETC…

FIELDS OF ACTIVITY

- **Industrial paints** (agricultural machinery, metallic constructions)
  - Epoxy paints / primers
  - Alkyd paint / primers
  - Varnishes
  - 2 component acrylic systems
  - Industrial flooring

Solvent borne formulations

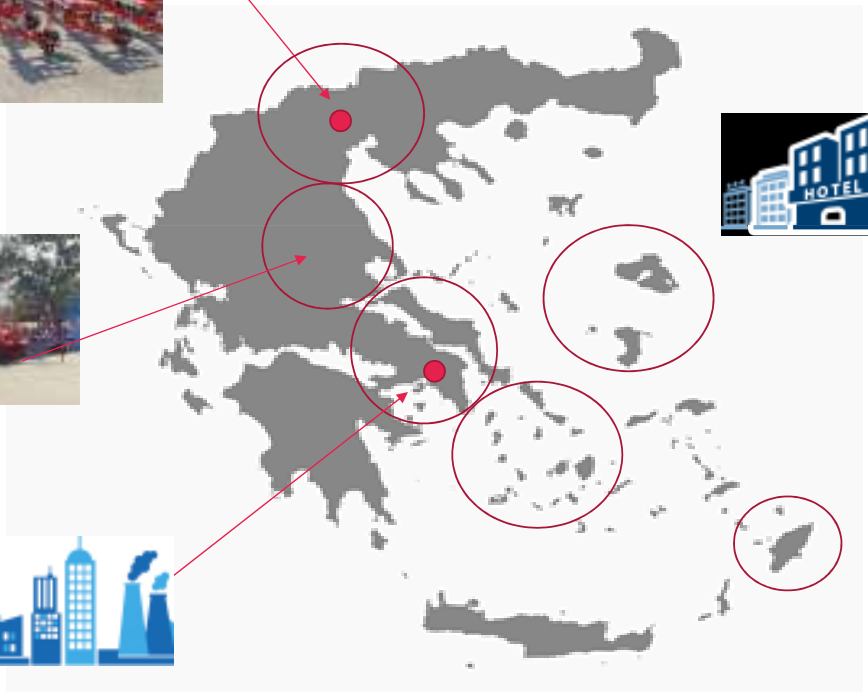
- **Marine paints** (shipyards, ship hulls)
  - Epoxy paints / primers
  - Alkyd paint / primers
  - Antifouling paints

Solvent borne formulations

- **Construction/Architectural paints**
  - Plastic paints (vinyl)
  - Acrylic paints
  - Sealants

waterborne formulations

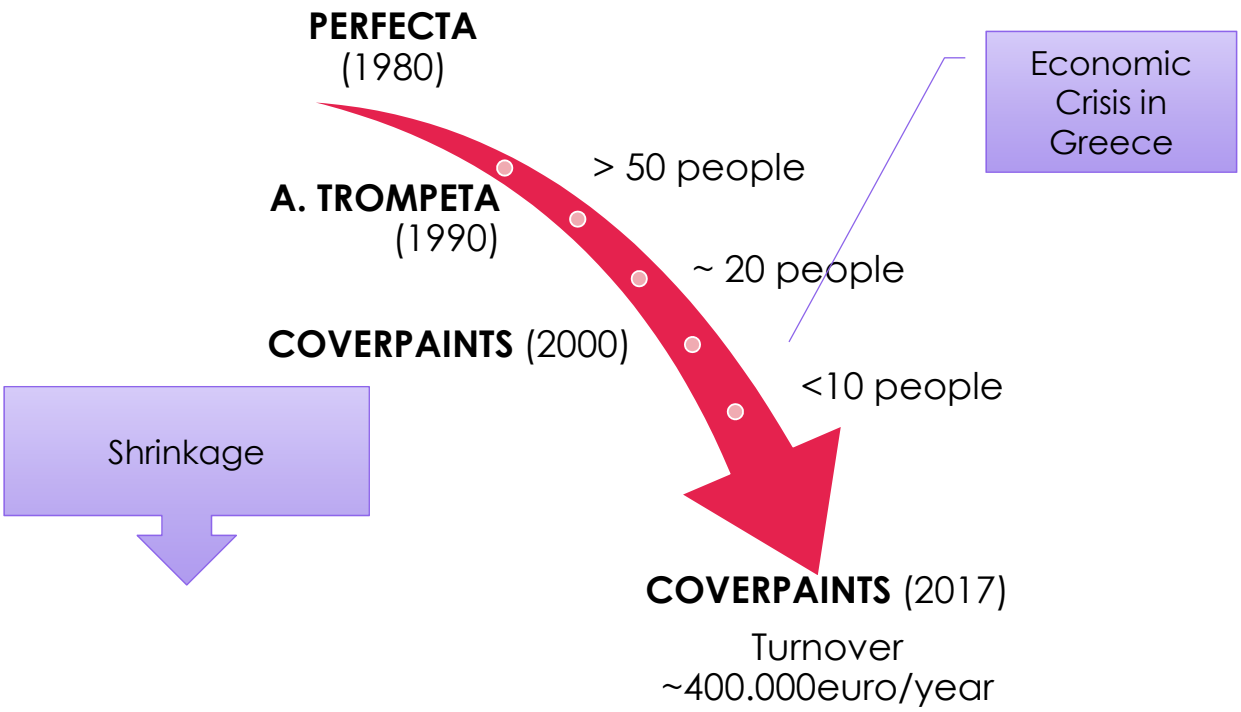
SERVICE AREAS



TYPE OF PERSONNEL

- Chemical Engineers
- Chemists
- Safety Technicians
- Workers
- Sellers
- Distributors
- Accountants

SIZE OF BUSINESS



INNOVATION IN COVERPAINTS

- Flexibility
- Production of small amounts upon request
- Close to the consumers needs
- Deep knowledge in paint technology
- High quality
- Short time delivery
- Production of special colour requirements upon sampling
- Facilitations in payment

SWOT ANALYSIS

PAINTS MARKET IN GREECE

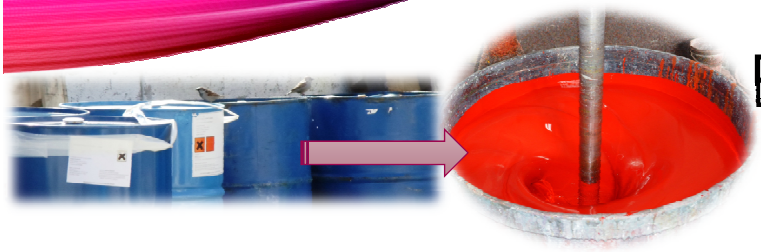
- 87 companies (http://www.europages.co.uk/companies/Greece/painting.html)
- 1500 employees in total
- Market: 252 M euros (2014)
- Construction paints market: 190M euros
- 10 Greek companies (>3M euros turnover) in construction sector
- 80% of construction paints belong to Greek companies
- Exports: 5% of Greek market

PAINTS MARKET IN GREECE

- 14 Greek paint companies have continued to operate and avoid bankruptcy despite the past eight years of crisis.
- The Greek paints industry lost 42% of turnover between the period 2008-2012; it was quite volatile, market is still flat (president of the Hellenic Coatings Association, A. Yannidis).
- However certain measures have been taken to buoy activity in the Greek paints industry, such as reinforcing the distribution chain and ensuring availability of 2,800 paints in retail shops throughout Greece.

PAINTS MARKET IN GREECE

- Greek paints and coatings companies have been able to extend their geographical reach and physical presence by creating 20 affiliated companies abroad on top of five local factories which cater for local needs.
- The Greek paints industry continues to invest in research, developing innovative products and standardizing products in line with European specifications.
- The paints sector has the highest number of products with eco label, with more than 170 products, according to the association press release.



PRODUCTION PROCEDURE

- Design
- Raw Materials Selection
- Weighting
- Pre-mixing (Resin, Solvents)
- Pigmentation
- High-Shear mixing
- Adjustments (Color, viscosity)
- Quality Control
- ....

PRODUCTION PROCEDURE

- ...
- Grinding (pearl-mill)
- Filtering
- Weighting
- Packaging
- Quality Control
- MSDS/SDS
- Distribution
- Support Services

SKILLS NEEDED FOR PAINTS INDUSTRY

- Process design
- Material Science
- Polymer technology
- Organic / Inorganic Chemistry
- Physical Processes (Mixing, Grinding)
- Quality Insurance
- Rheology
- Spectroscopy / Analytic chemistry
- Logistics / Supply chain
- Marketing

Chemical Engineer

RELATED SUBJECTS IN THE SCHOOL OF CHEMICAL ENGINEERING

- Inorganic/Organic chemistry
- Electrochemistry
- Physicochemistry
- Metals chemistry
- Physical processes
- Polymers technology
- Materials wear and protection methods
- Micro-/Macro-economy
- Business Management & Administration
- ....
- & **1** related lab exercise in 5 years of Chemical Engineering studying

However, none of the aforementioned contained 1 full lecture on paints technology!!!

THE REAL NEEDS

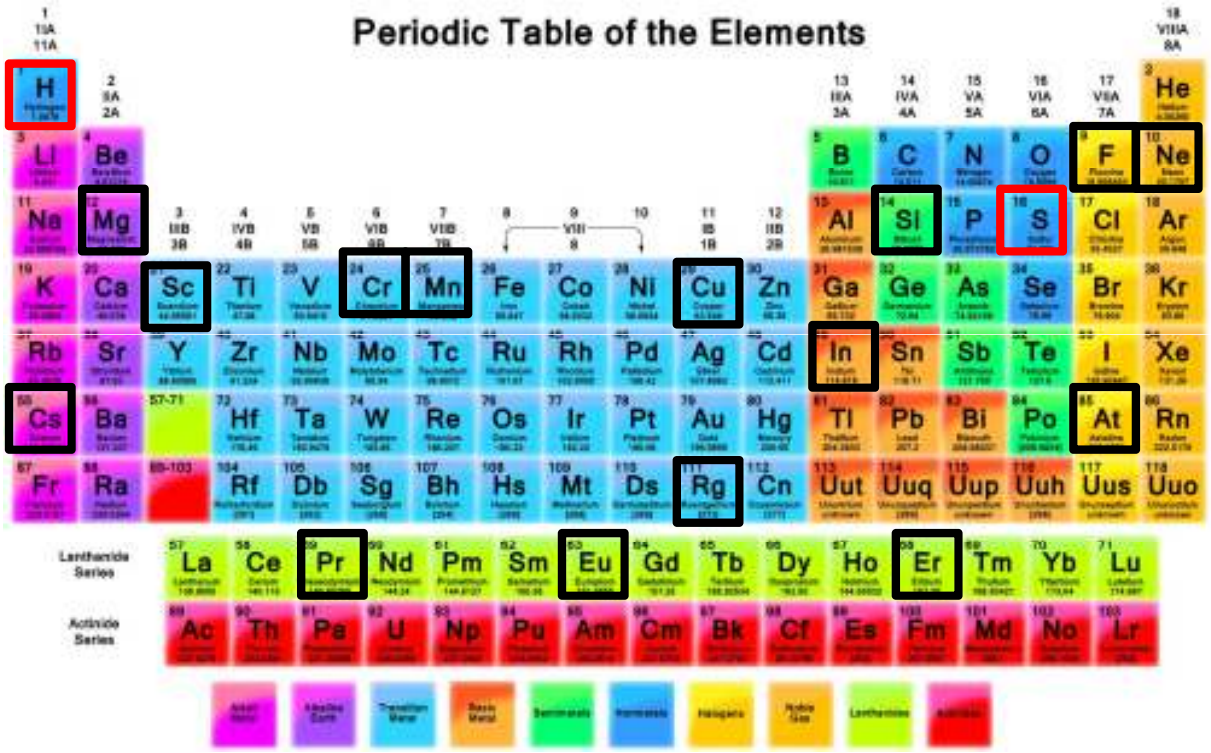
- Problem solving
- Manipulation of materials
- Materials choice
- Recipes design / Product development
- Production control / Assessment
- Manipulation of equipment
- Production design
- Administrative skills
- Safety regulations / Practices
- Customers support

NEEDS FOR INNOVATION

- ecological paints (water-based, powder, high-solid, radiation-curing)
- modern technologies for anti-corrosive protection of metal articles and pipes, gas- and oil-pipe-lines, tanks
- flexible block-modular schemes of paint production with minimum of waste
- effective systems of paint application without waste
- paints for special coatings (ship-building, aircraft industry, cosmos etc).

NEEDS FOR INNOVATION

- Regulatory sector → Easier procedures
- Extroversion → Increase of exports
- Focused studies in Universities
- Master Programs in Paint Technology
- Standardized production and quality control procedures
- Research & Development
- Participation in National and EU projects
- Competiveness
- New eco-friendly materials / products



DEFINITIONS

- **H** & **S**: Health & Safety
- **F**: Flexibility
- **Ne**: New ideas/products
- **Cr**: Creativity
- **In**: Innovation
- **At**: Attitude
- **Pr**: Production
- **Rg**: Regulation
- **Sc**: Supply chain
- **Cs**: Cost
- **Si**: Standards
- **Mn**: Manufacturing control
- **Mg**: Market growth
- **Eu**: EU market
- **Er**: Earth (Environment)
- **Cu**: Culture

ENVIRONMENTAL CONCEPT

- Elimination of wastes
- Recycling materials
- Use of eco-friendly materials
- Recycling packaging
- Life Cycle Analysis of basic products

THANK YOU FOR YOUR ATTENTION!

Cover your life with color…