

**CRAY VALLEY**

**CRAY VALLEY IBERICA**

**ENERGY EFFICIENCY IMPROVEMENT**

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**European Responsible Care Awards 2011**

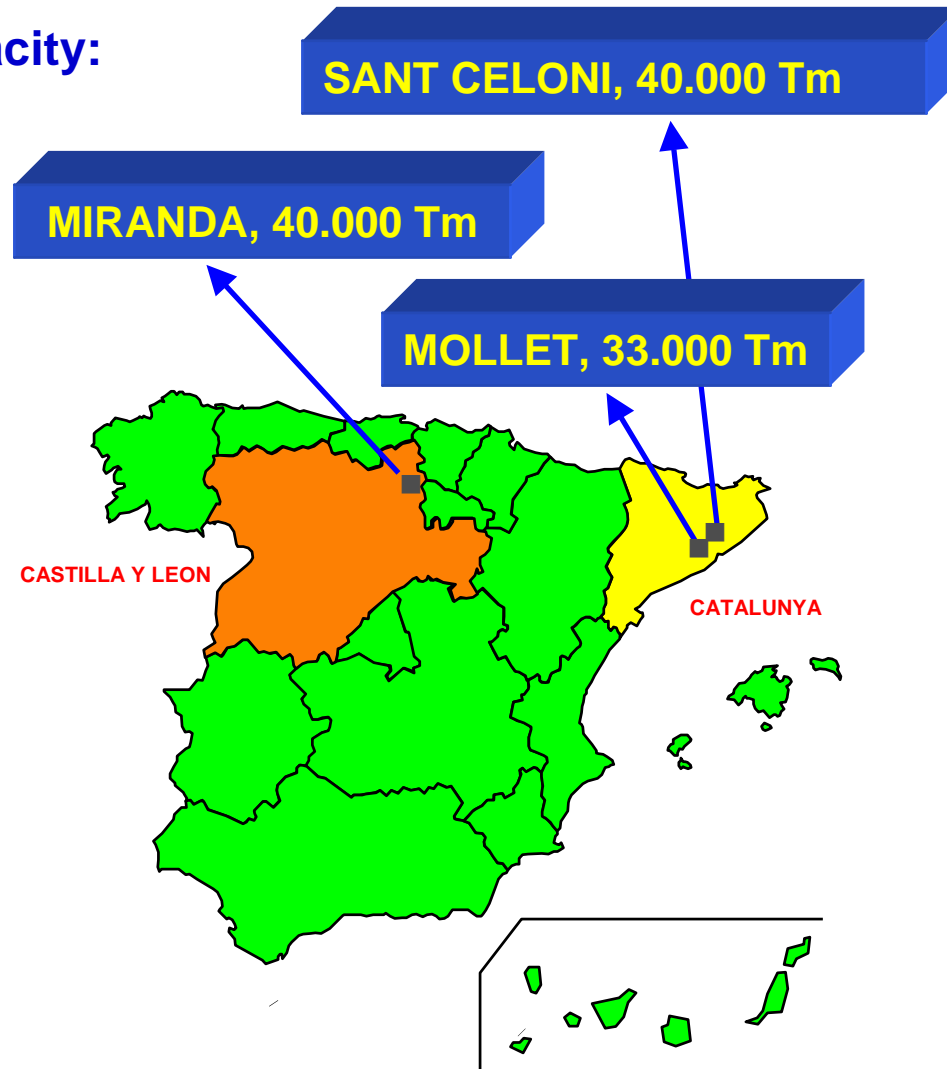


**TOTAL**

# Cray Valley Ibérica in 2010

CRAY VALLEY

Capacity:



- 2010 SALES: 135 M EUR
- 2010 SALES VOLUME: 82.000 TM
- Local sales : 50 %
- Export sales : 50 %
- Employees: 256



**Mollet del Vallés, 70 emp**



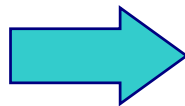
**Sant Celoni, 119 emp**



**Miranda de Ebro, 65 emp**

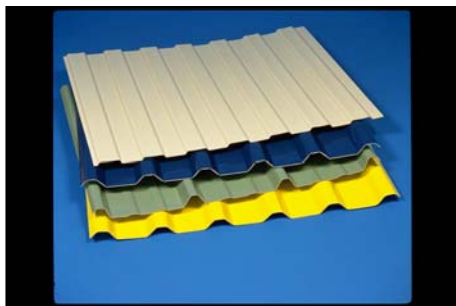
# Products and applications

- Unsaturated polyester
- Gel Coat



- Reinforced plastics
- Sanitaryware, construction.
- Water sports, automotive.
- Concrete, synthetic marble.
- Transport, leisure.

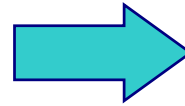
(Miranda de Ebro)



# Products and applications

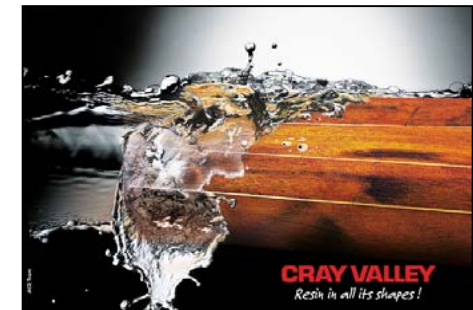
CRAY VALLEY

- Alkyd resins
- OF Polyester
- Acrylic resins
- Emulsions



- Decorative paints and wood stains
- Industrial & anticorrosion coatings
- Printing & adhesives

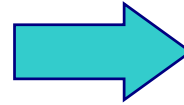
(Mollet del Vallès, Sant Celoni)



# Products and applications

▪ Solid saturated polyester

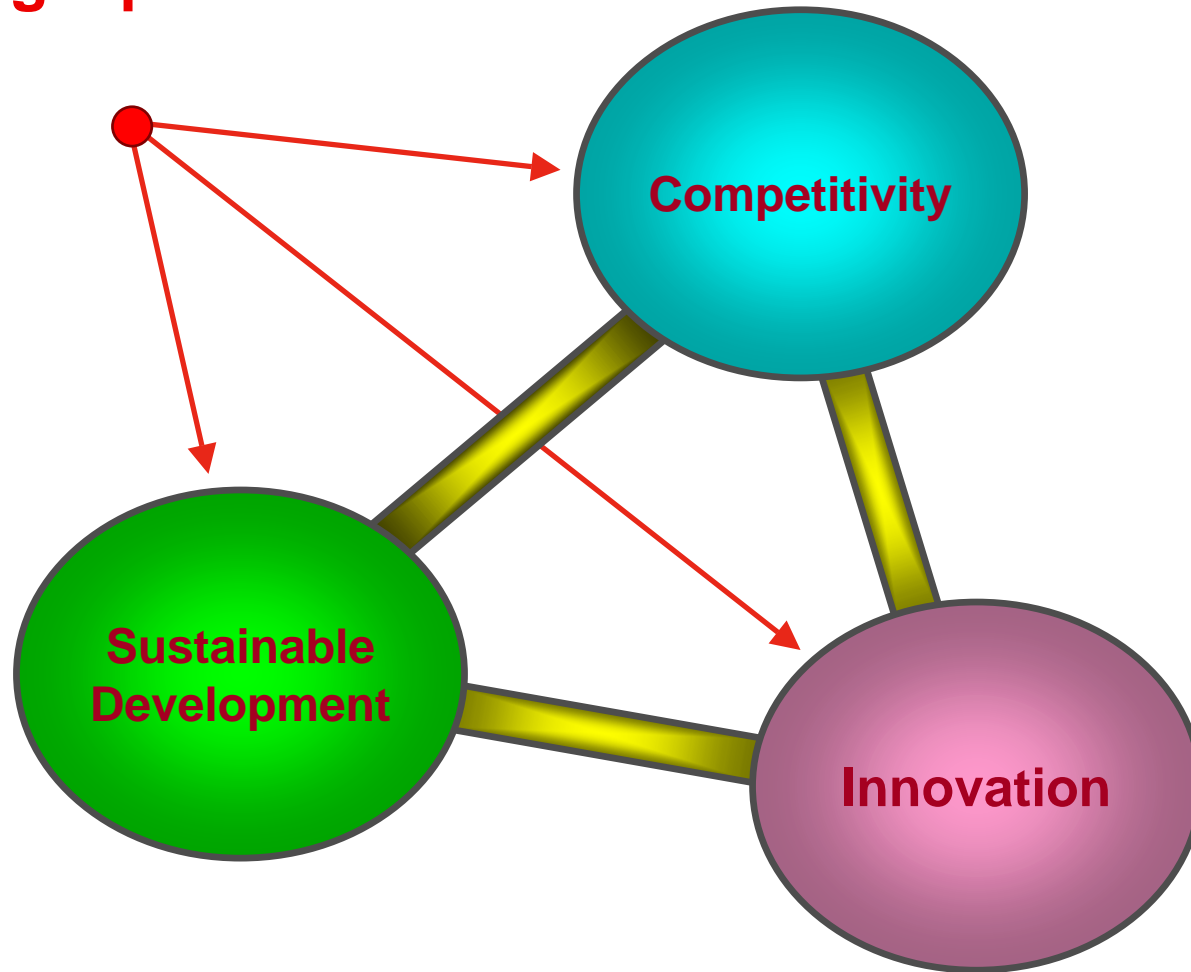
(Sant Celoni)



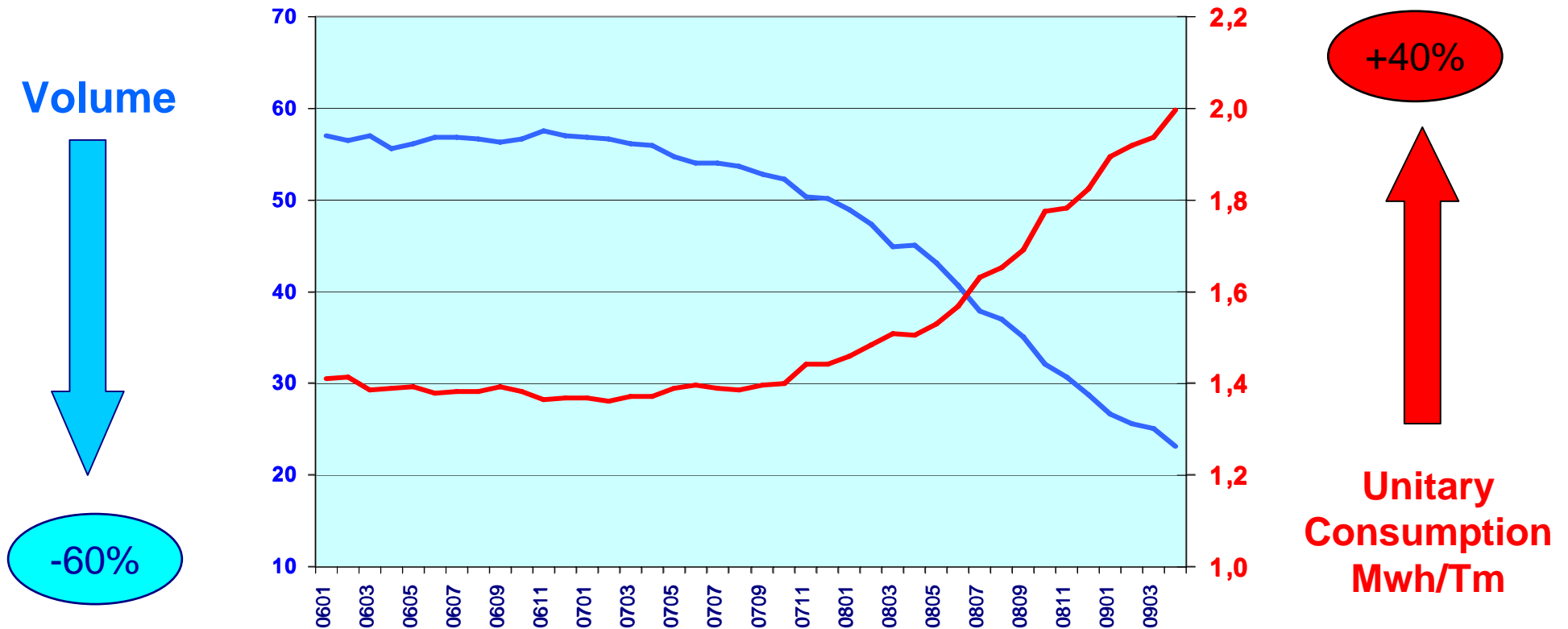
▪ Powder paints



# **Cray Valley Ibérica Strategic plan**



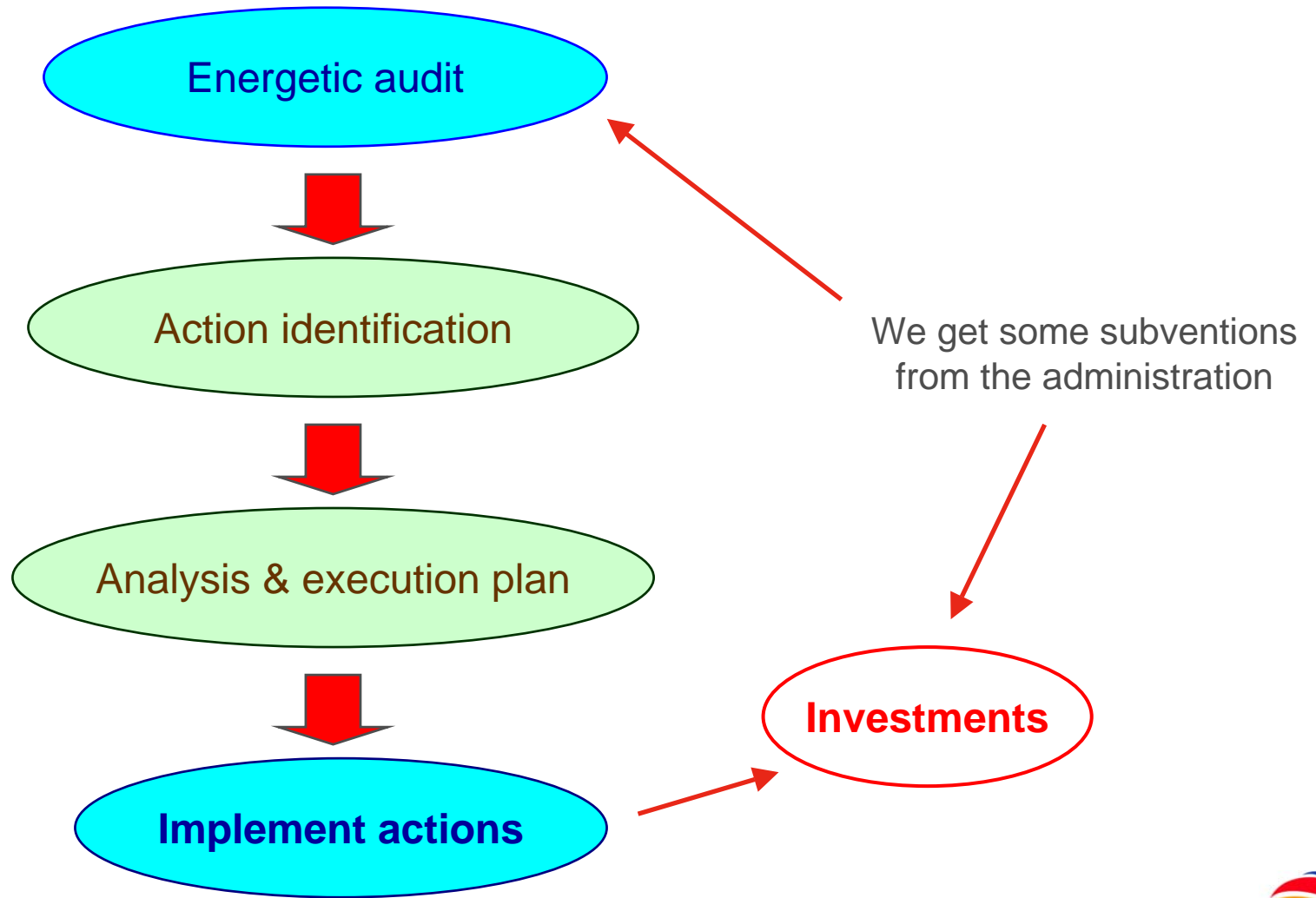
The reorganization of the activities & the economic crisis have reduced the volumes. **CRAY VALLEY**  
 As a consequence the energy efficiency has decreased ...  
 CVIb has included the energy efficiency improvement in the Strategic Plan as a mean project in the Sustainable Development principles and Responsible Care.  
 Sant Celoni Plant has been chosen as a pilot plant.



Why we started the project



We decided to improve the energy efficiency of the plant to reduce the environmental impact & to be more competitive ...



What we have done

## The energetic audit has identified some actions to improve the energy efficiency of the plant ...

EQUIPMENT	IMPROVEMENT	saving/year (kWh n.g.)	saving/year (€)	Investment (€)	Pay-back (years)	Energy saving (%)	CO2 emissions reduction (T/year)
Steam boilers	Purges heat recovery	621.985	13.901	18.000	1,3	0,6	98,27
Steam boilers	Purges continuous process automatization	64.489	1.441	2.850	2	0,1	10,19
Steam distribution network	Thermal compressor for condensed recuperation	4.050.084	90.519	170.000	1,9	4	639,91
Boilers	Heat recovery of combustion gases	5.401.077	120.714	201.000	1,7	5,4	853,37
Boilers	Burners parameters improvements	1.107.365	24.750	2.200	0,1	1,1	174,96
Generation and steam distribution	Insulation improvements	3.975.848	88.847	34.980	0,4	3,9	628,18

What we have done

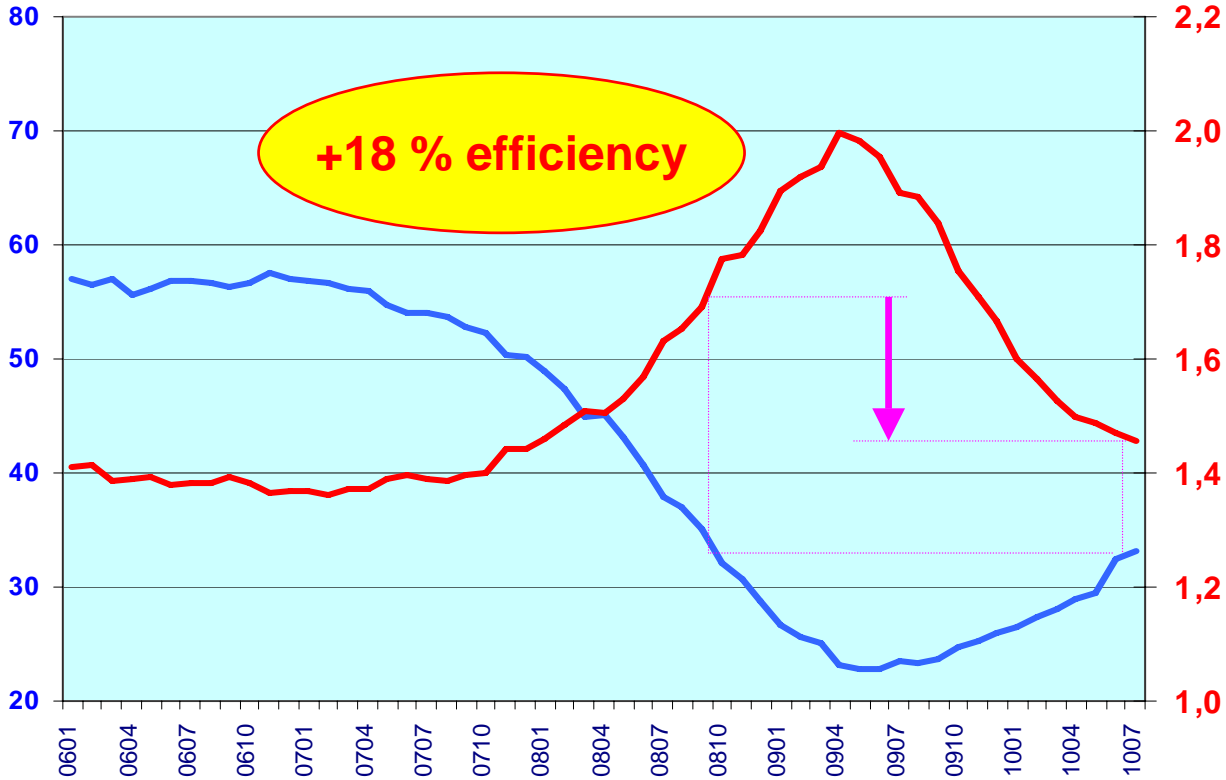


**The actions with the higher impact and low pay back time have been implemented ...**

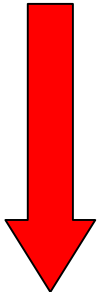
	<b>action</b>	<b>saving/year</b>	<b>cost</b>	<b>pay-back</b>
<b>GAS</b>	powders process improvements	30 K€	0	-
	better management & control of heaters	72 K€	5 K€	1 month
	thermal insulations	35 K€	25 K€	8 months
	heat recovery from heaters emissions	31 K€	55 K€	1,8 years
<b>ELECT</b>	pressure reduction of compressed air	6K€	0	-
	improvements in refrigeration water control	18 K€	12 K€	8 months
	low consumption lighting	4 K€	6 K€	1,5 years
	new high efficiency air compressor	21 K€	40 K€	1,9 years

**With excellent results ...  
and the project is not finished !**

  
**Volume**



**Unitary  
Consumption  
Mwh/Tm**



**This means a reduction of 1.500 Tm of CO2 per year !!**

## **Next step...**

To continue with the implementation in Sant Celoni Plant.

Start the process in Mollet del Vallés and Miranda de Ebro plants.