

# 1. Product Presentation

## Product Description-Characteristics

- Function: lightening Weight: kg 2.23
- Number of different components: 20
- Total components: 43
- Main material: plastics

# 2. LCA Presentation

- Assumptions

	Assumptions	Explanations
Functional Unit	Life time of Volvo car (17 years)	The lamp must lighten during the entire car life time
Use of the lamp	Minimum: 1 h/day Maximum: 3,5 h/day	Differences between Northern and Southern Countries
Use of the beams	60 W 90% 115W 10%	
Bulb change	4 times in the life time	Shorter life time
Head Lamp change	0.5 pc.	Risk factor for accidents 50%
Transportation	Production: Taiwan Final destination: Sweden	
Disposal	Landfills	

# 4. PRIORITIES | STRATEGIES

## A. Considerations:

	Focus on	Improvement on
LCA	Usage phase Production	Consumption of energy Material/weight reduction
Marketing Aspects	Consumer behaviour Sustainable image	Frequency in use General aspect
Law / Regulation	Process / Disposal phase	Minimisation of emissions Recycling



### Cost

- economically feasible
- environmentally and economically efficient
- financially advantageous
- marketable: attractive and suitable
- price & quality optimum relation

### Cultural: consumers' behavior

- rational use
- environmentally aware
- new image
- new philosophy
- suitable to consumers needs

### Legal

- beyond-compliance regulations
- share responsibility

## 6. Scenarios

### Scenario 1 - "End of pipe solution"

#### Strategy:

- high quality
- traditional product
- price/quality relation
- security & safety
- durability

#### **Technical improvements of the existing**

Reduction of bulbs (2 instead of 3)

Change the reflector material

Change the cover material

Monomaterial components\*

\* Change of plastic with HPDE on the base of minimum eco-point score

#### **Target market lamp**

Volvo traditional consumers:

- high class
- family car
- working car(professional use)

## Scenario 2 - 'Re-design'

### Strategy:

- revolution of the tradition
- contemporary product
- high quality
- *high tech*
- new design of the headlamp entailing at the new car design
- price/quality relation
- security & safety
- Sustainable design in order to resist at the time
- Redesign the new lamp and the car using *memories* from older models (amazon)
- New target groups

### Substantial improvements for the new lamp

Energy consumption/ using more efficient lamp

Reduction of the size weight and materials

Redesign of the car mask

Monomaterial components\*

Training programs for drivers

Sensor

### Target group

- city' people
- mid./high class
- professional business people
- dynamic people
- young people

## 8. Recommendations

### Lamp

- More efficient - low energy consumption
- Better quality of light
- One bulb with two functions
- Mono-material

- Size - weight reduction
- Switching light system connected with sensors
- Easy to replace
- Good fashionable design

## Car

- Sustainable image in order to resist to time
- Material reduction: size weight
- Cleaner production process
- Lighter and more efficient engine
- Mono-material
- Simple and functional design
- Ergonomy
- safety

## Sustainable Volvo

- Clean process for a sustainable production
- Cultural change
- Widening target group
- Public transportation: buses trucks. trains
- Bicycles production
- Services development: car share programs. educational programs