“External rear-view mirror replacement by Head Up Display images”
“External rear-view mirror replacement by Head Up Display images”

Index

I. INTRODUCTION

II. TECHNOLOGY DESCRIPTION

III. CURRENT SITUATION OF THE BUSINESS IN SPAIN

IV. EVOLUTION FORECAST, OPPORTUNITIES AND STRATEGY

V. REQUIREMENTS
I. Introduction

Aim:

Projection of useful information in the field of vision of the driver:

- Better safety: driver can use more information
- Improved aerodynamics of the vehicle, by removing external mechanical components

Business scope and line:

- Development of high-tech technology (aeronautics, Formula1) for common vehicles
  - Significant saving of materials
  - Design of new low cost technologies to incorporate into all vehicles
- Removing of the outer rear-view mirrors:
  - Traditional suppliers of this products changing into this new technology
  - Aerodynamics properties studies
  - New general design of the vehicle (more futuristic and integrated)
II. Technology description

Description of the designs and technologies

- **Basic medium**: light beams superimposed on transparent surfaces (LED or LASER applications)

- **Possibly improved system**, allowing to adapt the intensity of the image depending on the luminosity (luminosity sensors)

- Appropriate design of the windscreen, to supporting the light beams
III. Current situation of the business in Spain

Current situation of the Technology in Spain:

- Some groups specialized in this technology: photonic science institute (ICFO) and ADTelecom

- Companies interested:
  - BMW, Lexus, Citroen, Toyota, Honda, GM, and Nissan (car constructors)
  - Delphi, Siemens, Denso (parts suppliers)
IV. Evolution forecast, opportunities and strategy

- Good opportunity of commercialization, if a cheap HEAD-UP DISPLAY system is developed
- Technology not yet enough advanced to put into practice in automotive
- Opportunity of application of this technology for new design perspectives of GPS (current GPS could be forbidden)
- Current information indicators could be removed (freeing of space for other uses, saving of materials)
- Technology enables a shorter reaction time of the driver, when looking successively at the road and at the indicators -> less accidents
- Possible alliance with aeronautics to accelerate the time-to-market

**Strategy**: Requires high quality products (Risk of perception as kind of “science fiction”)

- **Preferable vertical integration for companies** starting from scratch, working in several sectors, or **horizontal** through a traditional rear-view mirror supplier, interested in such activities of change.
V. Requirements

- Economic aspects: Necessity to reduce the price of this technology

- Product specification:
  - No further investigation required than about materials and light beams
  - Technology already advanced, but is still to do
What is Invest in Spain?

We share mutual Interests
INVEST IN SPAIN offers, without charge, an integrated investment support service

I. Study and assessment of opportunities:

i. We provide reports tailor-made studies and all the relevant information you need to establish yourself in Spain.

ii. Starting-up: finding the ideal location identifying suitable partners and/or consultants and assessors, offering institutional contacts; lawyers, management services, accountants, employment agencies and executive headhunting services, assessment in permit and licensing procedures.

iii. Post-investment: specialized assistance and support, facilitating contact with the relevant players, assessing the regulatory and legal environment, with a permanent service of monitoring opportunities and aid, thereby facilitating your integration into the Spanish industrial fabric and its sectored networks.
CONTACT:

Invest in Spain
Tel. +34-915035800
Fax; +34-915035803
Email: investinspain@investinspain.org
www.investinspain.org