S_LIFE

European Synergies and Cooperation for Sustainable Vehicle along the Life-Cycle

Project number 285811

Grant Agreement 285811 - S_Life presentation
The whole Transport industry has to tackle major worldwide environmental challenges:
- Combating climate change
- Sustainable use and management of natural resources and wastes
- Energy saving
- Reducing CO₂ emissions

In this context, Europe has adopted ambitious goals towards a 50% more efficient transport system by 2030.
S_LIFE is a **European project** which aims at:

- **Contributing to the transition to a sustainable transport system** focusing on resource efficiency and waste management
- Developing a **Joint action plan to increase regional economic development** based on an **integrated approach of the entire value chain** along the whole life cycle

**Budget of 2,4M€**: partly funded by the European Commission through a grant from the **Seventh Framework Program (FP7) Capacities – Region of Knowledge**

It has started in **January 2012** and will last 3 years, **till end of 2014**.
Sustainable use and management of natural resources and wastes in Automotive:

- Quantity of raw material used to manufacture vehicles
- Use of recycled material to manufacture vehicles
- Recycling of vehicles

Fuel consumption is not taken into account in S_LIFE

S_LIFE proposes an integrated approach of the entire value chain all along the vehicle life cycle.

S_LIFE covers both existing and emerging vehicles:

- Internal combustion engine vehicles
- Electric and Hybrid vehicles
- Lightweight structure vehicles
S_LIFE Consortium

S_LIFE Coordinator
(Montbéliard)

INTERFACE EUROPE
(Brussels)

ARN
(Amsterdam)

Bayern Innovativ
(Nürnberg)

Pôle Véhicule du Futur
(France)

(Stuttgart)

ACS
(Ljubljana)

S_LIFE General presentation, Janvier 14th 2013, Etupes (F)
As part of the a FP7 – RoK program, S_LIFE will focus on Research and Innovation by several means:

- **Develop the cooperation between European world-wide class clusters** in order to help them developing new coherent **greening solutions** all along the value chain:
  
  ![Scientific solutions](image1) ![Economic solutions](image2) ![Structure solutions](image3)

- **Develop a European knowledge of available skills and infrastructures**

- **Strengthen the research potential of European regions**

- **Streamline and strengthen the coherence of Regional and European support**

- **Accelerate the transfer of technology from research infrastructures to industries**
Work plan & timing

2012

WP1 Mapping & SWOT
(Collect & Analyse)

2013

WP2 Joint Action Plan
(Define actions)

WP3 Roll out of JAP
(Prepare implementation)

2014

WP4 Dissemination

WP5 Mentoring

WP6 Project Management

WP7 Project Assessment
Work and deliverables

WP1

- 56 Existing studies
- + 60 Interviews
- + Online questionnaire

Database of infrastructures
Work and deliverables

WP1

56 Existing studies
+ 60 Interviews
+ Online questionnaire

Database of infrastructures

SWOT Analysis
## SWOT / SOAR Analysis

### Similarities
- Entire value chain is covered
- Research capacities (ex: materials)
- Innovation Financial support

### Complementarities
- Research capacities (ex: recycling)
- Major industrial fields
- Involvement in EU associations

### Differences
- Recycling rates evaluation method
- Innovation funding targeting recycling

### Strength & Weaknesses
- **Strengths**
  - « Propriété partagée »
  - Harmonisation EU de désimmatriculation et d’export de véhicules
  - Véhicules n’atteignant pas les centres VHU

- **Weaknesses**
  - Random value chain
  - Research capacities (ex: recycling)
  - Major industrial fields
  - Involvement in EU associations

### Opportunities & Threats
- **Opportunities**
  - Reach the Recycling rates of 2015 recycling directive
  - Public awareness
  - Find replacement alternatives for dangerous materials and rare earth metals
  - Improve Automotive Industry competitiveness through resource efficiency
  - Initiate collaborative projects

- **Threats**
  - Recycling rates evaluation method
  - Innovation funding targeting recycling
  - Public awareness on Recycling of vehicles
  - Support from consumer associations
Work and deliverables

WP1

56 Existing studies + 60 Interviews + Online questionnaire

Challenges

Database of infrastructures

SWOT Analysis

Database of funding opportunities
## Identification of Challenges

<table>
<thead>
<tr>
<th>Stage</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material</td>
<td>Supply chain of secondary material unstable</td>
</tr>
<tr>
<td></td>
<td>Contaminants ruin secondary material quality</td>
</tr>
<tr>
<td></td>
<td>Competition from LCC low cost countries</td>
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<tr>
<td>Manufacturing</td>
<td>Materials and assembly solutions not suitable for recycling</td>
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<td></td>
<td>Lack of communication with the End of Life stakeholders</td>
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<tr>
<td>Use</td>
<td>High repair costs $\rightarrow$ early ELVs</td>
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<tr>
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<td>Second hand component supply chain</td>
</tr>
<tr>
<td>End of Life</td>
<td>ELV not reaching certified dismantling structures</td>
</tr>
<tr>
<td></td>
<td>Recycling of new materials</td>
</tr>
</tbody>
</table>
Work and deliverables

WP1

- 56 Existing studies
  + 60 Interviews
  + Online questionnaire

- Database of infrastructures
- SWOT Analysis
- Database of funding opportunities

WP2

- Vision Document

Challenges
Vision Document

Purpose and structure of the Vision Document:

• Analysing the basic challenge areas withstanding increased resource efficiency in the automotive value chain

• Linking automotive trends with respect to resource efficiency implications

• Providing recommendations and Visions to optimise the vehicle life cycle

• Describing the links between the vehicle life phases on resource aspects

VISION DOCUMENT

1. Accessible reading
2. Complete overview
3. Platform creating
4. Common understanding
5. Addressing European challenges

European Strategic Research Agenda  (Joint) Action Plan  Implementation & Business plan
## Vision 2030

<table>
<thead>
<tr>
<th>Stage</th>
<th>Vision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Raw Material</strong></td>
<td>New materials to allow better recyclability from complex and inhomogeneous waste streams</td>
</tr>
<tr>
<td></td>
<td>Profitable market/applications for non-metallic materials</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td>Car manufacturers and their subcontractors to continue their efforts in order to design and manufacture recyclable cars</td>
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<tr>
<td></td>
<td>Increased knowledge transfer from OEMs to Tiers about recycling</td>
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<tr>
<td><strong>Use</strong></td>
<td>Harmonization of vehicle export and de-registration rules</td>
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<td></td>
<td>Expansion of the use of second hand parts in car repair</td>
</tr>
<tr>
<td><strong>End of Life</strong></td>
<td>Priority is given to material valorisation (when profitable) and to energy recovery. Landfilling being banished</td>
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<td></td>
<td>A common ELV definition among EU</td>
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</tbody>
</table>
Work and deliverables

**WP1**
- 56 Existing studies + 60 Interviews + Online questionnaire
- Database of infrastructures
- SWOT Analysis
- Database of funding opportunities

**WP2**
- Vision Document
- Strategic Research Agenda
Purpose and structure of the Strategic Research Agenda:

- Common Strategic Objectives based on a common S_LIFE Vision and scope
- Informs European Commission about the future Research and Innovation needs in the specific S_LIFE area
- Fosters industry, authority and academia stakeholders in their specific research roadmaps
- Leads to European-wide (joint) actions in the specific research programmes
- Avoids duplication of work across Europe

**Strategic Research Agenda**

1. Specific
2. Measurable
3. Appropriate
4. Realistic
5. Timely
## Research themes

<table>
<thead>
<tr>
<th>Categorical Area</th>
<th>Research Themes</th>
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<tbody>
<tr>
<td><strong>Scientific &amp; Technological</strong></td>
<td>Material chemistries with optimal recycling properties</td>
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<td>Sorting processes for complex materials</td>
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<td>Smart and profitable solutions for vehicle residues</td>
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<td><strong>Organizational &amp; Societal</strong></td>
<td>Consumer awareness on Resource Efficiency in the automotive</td>
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<td>Standardisation and certification on secondary components</td>
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<td>Handling procedures for electrified mobility</td>
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<tr>
<td><strong>Economic &amp; Regulatory</strong></td>
<td>Statistical analysis of secondary materials available</td>
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<td></td>
<td>Harmonization of registration / deregistration rules</td>
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<td>Simpler and harmonized reporting methods other EU</td>
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Work and deliverables

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WP2
- Vision Document
- Strategic Research Agenda
- Joint Action Plan
- Business plan

WP3
- Matchmaking platform
- Collaborative projects
Next steps

- Validation of Vision Document: March 2013
- Strategic research Agenda: April 2013
- Joint Action Plan & Business Plan: June 2013
- Periodic report to EC: July 2013
THANK YOU!