



# S\_LIFE

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



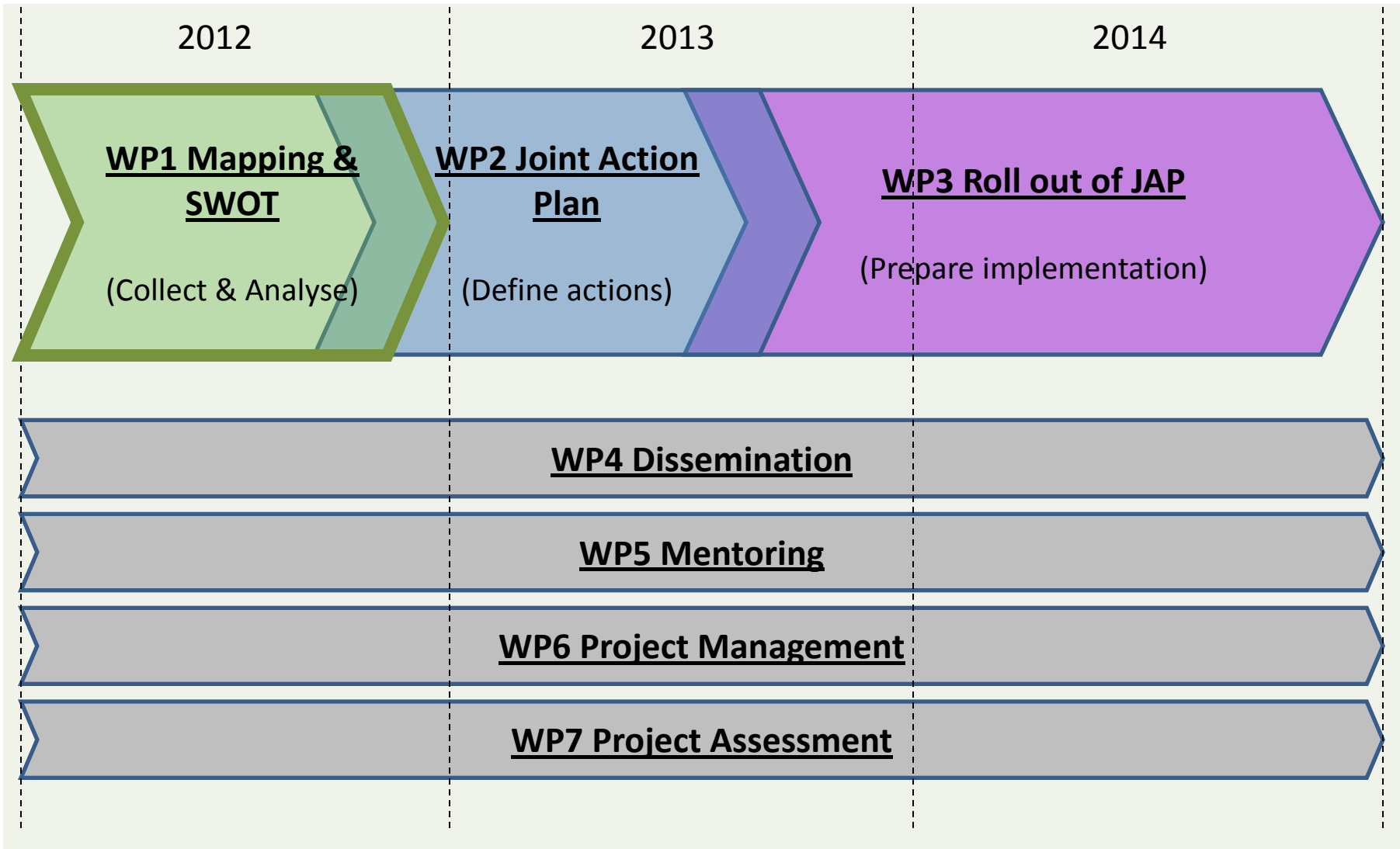
Project number 285811

# Concretely, the objectives



- **Assess the capacity of regional clusters** in contributing to the development of an integrated value chain for sustainable vehicles
- **Define common research priorities and collaboration strategies** in addressing the key challenges
- **Organize coherent and structured Regional and European support** to conduct research & networks in transport industry
- **Strengthen Regional and European knowledge skills, infrastructures and research driven clusters** via sharing tools, knowledge exchanges...
- **Set-up a financial plan** to enable S\_LIFE Joint Action Plan
- **Broadly communicate and disseminate** the project outcomes of S\_LIFE

# Workplan & Timing



## WP1

### Mapping of actual situation in Europe

- Mapping of existing research capacities
- Mapping of existing knowledge & best practices
- SWOT Analysis

## WP2

### European Strategy

- European Vision Document
- European Strategic Research Agenda
- Joint Action Plan (JAP)
- Business plan for financing JAP

## WP3

### Roll out of JAP

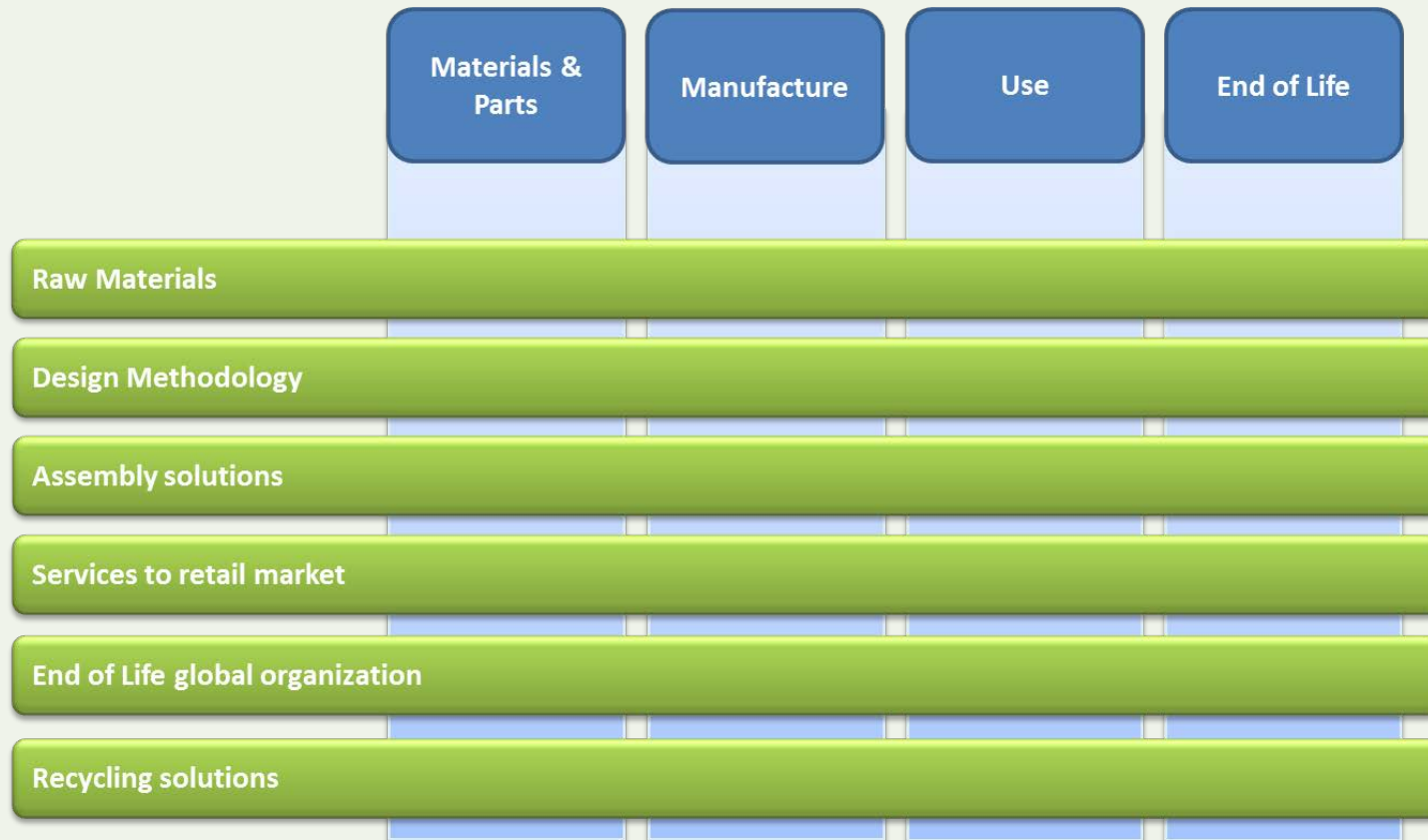
- Initiation and Funding of collaborative projects
- Funding of research work
- Implement a match-making platform

## WP5

### Mentoring of a less advanced cluster

- **Fine definition of the project scope**

# Project Framework

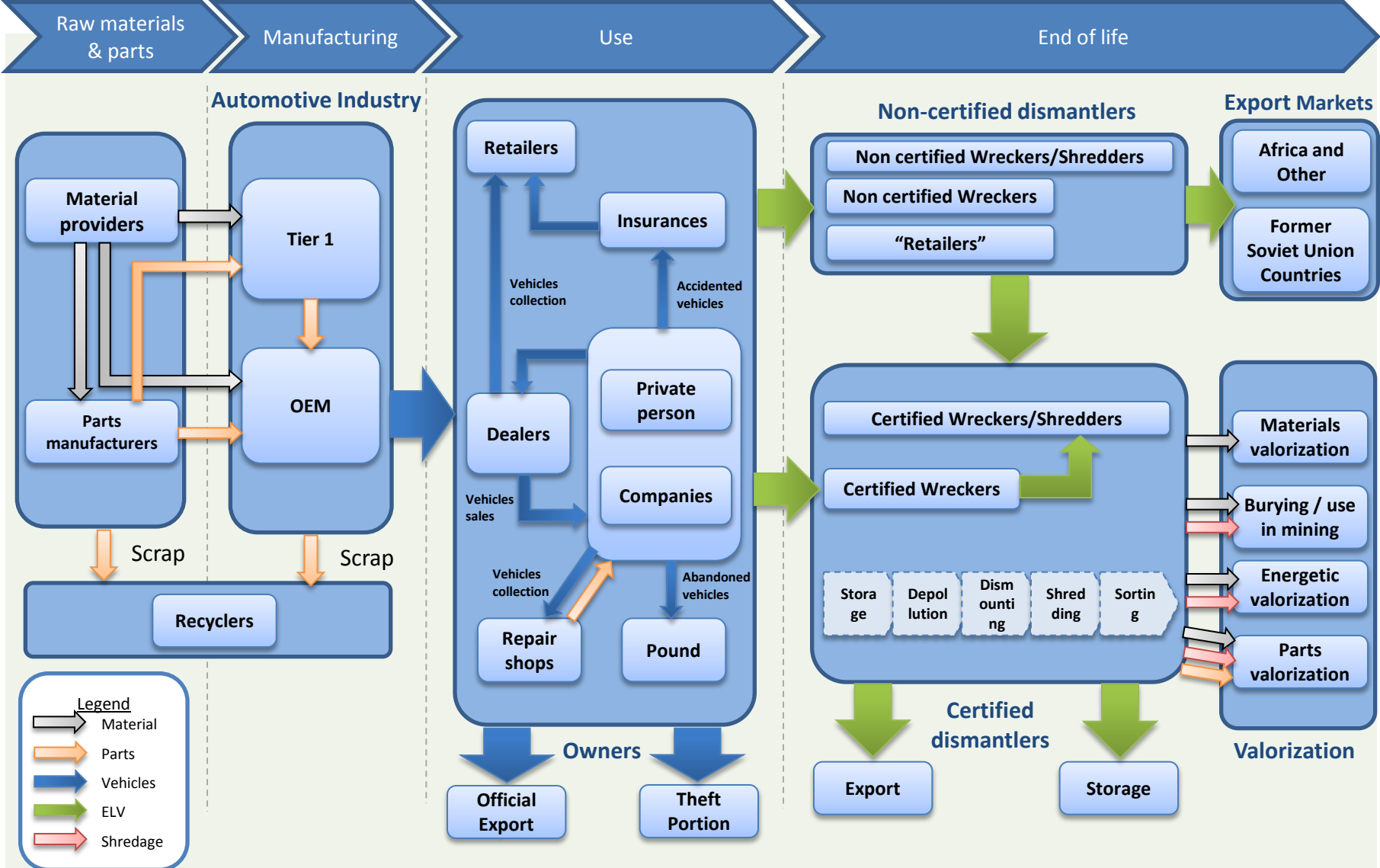


## Scope:

- Existing Market & Vehicles.
- Future Markets & Vehicles (Hybrid, Electric and light weight vehicles)

- **Fine definition of the project scope**
- **Mapping of the Stakeholders:**
  - list of companies, associations, knowledge centers.... related to S\_LIFE
  - Already more than 300 structures listed

# Value Chain





- **Fine definition of the project scope**
- **Mapping of the Stakeholders:**
  - list of companies, associations, knowledge centers.... related to S\_LIFE
  - Already more than 300 structures listed
- **Mapping of knowledge**
  - Analysis of existing studies → 56 studies have been reviewed
  - Interviews of Stakeholders → more than 50 interviews performed
  - Identification of bottlenecks and opportunities

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
<b>Raw materials and parts</b>	<p><b><u>Unstable Supply chain of secondary material</u></b></p> <ul style="list-style-type: none"><li>• <b>Unstable quality and volatile prices</b></li><li>• <b>Limited volumes</b><ul style="list-style-type: none"><li>• <i>Use of several sources with inhomogeneous characteristics &amp; quality</i></li><li>• <i>Total available not covering the market needs.</i></li></ul></li></ul>
Manufacture	
Use	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
<b>Raw materials and parts</b>	<p style="text-align: center;"><b><u>Contaminants ruins material quality</u></b></p> <ul style="list-style-type: none"><li>• <b>Copper residue in Aluminum</b></li><li>• <b>Paint, coating and other additive (flame retardants) in plastics</b><ul style="list-style-type: none"><li>• <i>Mixing different recycled plastic sources = mixing contaminants</i></li><li>• <i>Issue in regards to REACH regulation</i></li></ul></li></ul>
Manufacture	
Use	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
<b>Raw materials and parts</b>	<p style="text-align: center;"><b><u>Competition from third countries</u></b></p> <ul style="list-style-type: none"><li>• <b>Demand for Secondary material</b></li><li>• <b>Low price virgin materials coming from Third Countries</b></li></ul>
Manufacture	
Use	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p><b><u>Proportion of materials, assembly techniques are not suitable for recycling</u></b></p> <ul style="list-style-type: none"><li>• Design for disassembly is not a priority</li><li>• Recyclability is “competing” with other major challenges<ul style="list-style-type: none"><li>• Cost</li><li>• Weight reduction</li><li>• CO<sub>2</sub> emission reduction</li><li>• Security...</li></ul></li></ul>
<b>Manufacture</b>	
Use	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p><b><u>Missing knowledge at suppliers</u></b></p> <ul style="list-style-type: none"><li>• Lack of knowledge and interest</li><li>• Difficulty to predict/anticipate what the End-of Life solution will be for a vehicle, in the design phase</li><li>• Advantages and interest of eco-conception not part of corporate strategies</li></ul>
<b>Manufacture</b>	
Use	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p><b><u>Recyclable vehicle is not a marketing factor</u></b></p> <ul style="list-style-type: none"><li>• <b>Consumer is not yet ready to pay more for a recyclable vehicle</b></li><li>• <b>No financial interest to further motivate OEM and Tier 1</b></li></ul>
<b>Manufacture</b>	
Use	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p><b><u>High repair costs lead to earlier total loss</u></b></p> <ul style="list-style-type: none"><li>• <b>Missing efficient &amp; reliable supply chain of second hand parts</b></li><li>• <b>How to certify second hand parts?</b></li></ul>
Manufacture	
<b>Use</b>	
End of Life	



# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p><b><u>Not enough use of reused/regenerated components</u></b></p> <ul style="list-style-type: none"><li>• <b>Aftermarket not well organized in Europe</b></li><li>• <b>Not enough parts available for refurbishing</b></li><li>• <b>Less and less repairing activities</b></li></ul>
Manufacture	
<b>Use</b>	
End of Life	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p><b><u>ELV not reaching certified End of Life structures</u></b></p> <ul style="list-style-type: none"><li>• <b>A lot of ELV are exported to third countries</b><ul style="list-style-type: none"><li>• <i>What attractive business model to limit export?</i></li></ul></li><li>• <b>Many vehicles end up at non-certified recyclers</b><ul style="list-style-type: none"><li>• <i>Lack of efficient registration / deregistration system</i></li><li>• <i>What attractive business model to keep ELV in the legal structures?</i></li></ul></li></ul>
Manufacture	
Use	
<b>End of Life</b>	

# Bottlenecks / Challenges



Value Chain Item	Bottleneck
Raw materials and parts	<p style="text-align: center;"><b><u>Recycling of new materials</u></b></p> <ul style="list-style-type: none"><li>• <b>Recycling solutions for rare earth metals</b></li><li>• <b>Recycling solutions for composites</b></li><li>• <b>Recycling solutions for batteries</b></li></ul>
Manufacture	
Use	
<b>End of Life</b>	

- **Fine definition of the project scope**
- **Mapping of the Stakeholders:**
  - list of companies, associations, knowledge centers.... related to S\_LIFE
  - Already more than 300 structures listed
- **Mapping of knowledge**
  - Analysis of existing studies → 56 studies have been reviewed
  - Interviews of Stakeholders → more than 50 interviews performed
  - Identification of bottlenecks and opportunities
- **Online questionnaire:**
  - 4 questionnaires (one per step to the value chain)
  - To be broadly disseminated
- **SWOT Analysis**

# Next steps

**Finalize the collection of information**

**End of 2012**



**Prioritize the Bottlenecks to be addressed**

**Q1 2013**



**European Research and Innovation Strategy**

**Mid of 2013**



**Implement the actions & associated Business plan**

**2014**

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**MERCI!**

**THANK YOU!**



mobility  
ecology

technology  
sustainability

efficiency