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## The Italian ELV situation by Fiat Group Automobiles

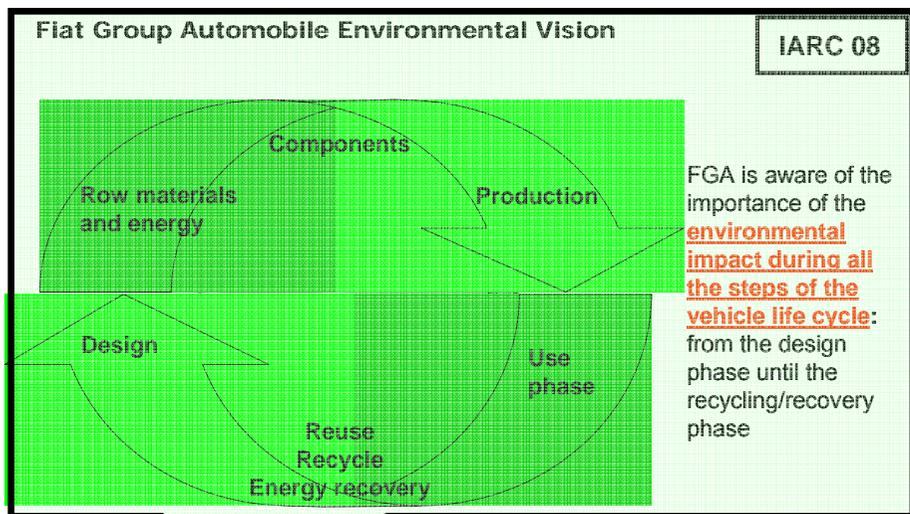
**Salvatore Di Carlo**  
**Fiat Group Automobiles**  
**ELV & Car Recycling**

**Francesco Bonino**  
**Centro Ricerche Fiat**

**IARC Congress, MUNICH-11th March 2009**



# FGA vision from IARC 08 ... to IARC 09



During IARC 08 Fiat Group Automobiles explained its Environmental Vision based on the reduction of the environmental impacts during all the steps of the vehicle life cycle.

**Conclusion** IARC 08

After have reached the Vehicles Manufacturer obligations of the European Directive 2000/53 for 2015 targets Fiat Group Automobile is hardly working on following items:

- **Post Shredding Technologies**: in Italy actually no industrial plants on post shredding technologies
- **Energy recovery technologies**: in Italy few Waste Energy Plants
- Option to **use recycled materials** (Italian waste transportation laws as economical restrictions)

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Option to work with Authorities and chain actors: **“Framework Agreement”** to help target achievement

The FGA conclusion of the IARC 08 is the starting point of IARC 09 presentation and is the leitmotiv of FGA for the ELV Management in Italy:

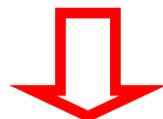
**Work with Authorities and chain actors in order to achieve all the ELV targets**



## Main critical aspects of the whole ELV chain in Italy

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- ➡ Complexity of authorization documents to transport and to treat ELV
- ➡ Different authorizative interpretations at regional level
- ➡ Criticality on the treatment, transport and disposal of car-fluff
- ➡ Lack of alternatives to the landfill disposal on the territory
- ➡ Need of standard methodology in Europe for the quota calculation: the similar vehicle in similar treatment facilities gives different recycling results in different countries

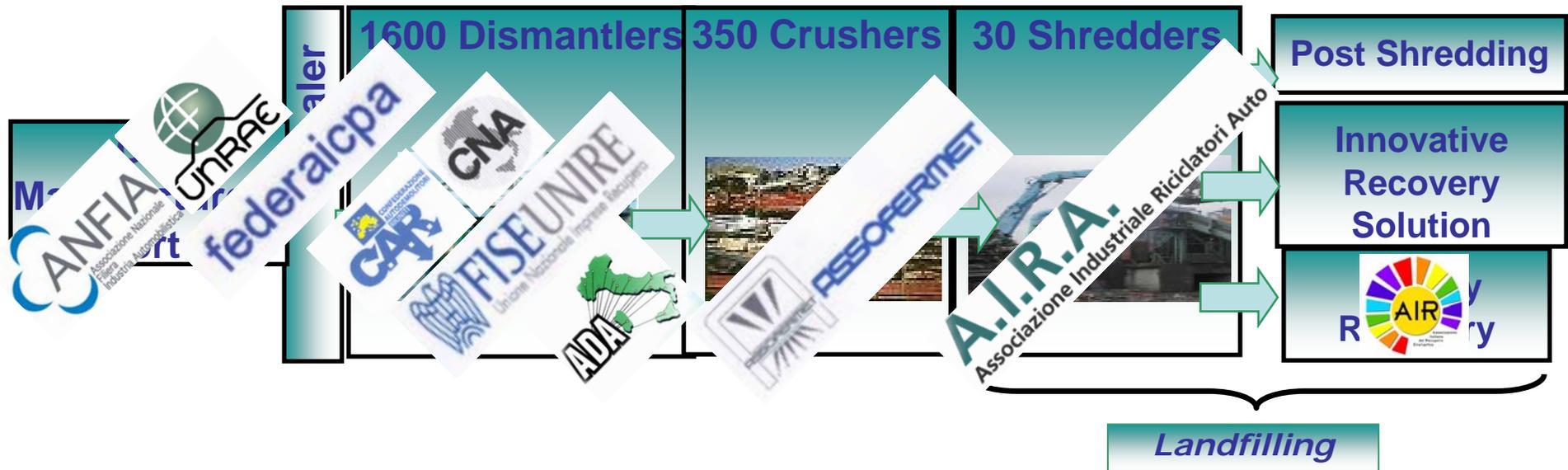


**All these aspects are strongly critical for the economic operators and may compromise the achievement of the target:**

**80% recycling / 85% recovery from 2006**

**85% recycling / 95% recovery from 2015**

# ELV Chain in Italy – Proposed Solutions



10 Associations representing more than 3500 single companies: from Fiat Group Automobiles to SMEs

**Target achieved: become a direct interlocutor towards the Italian Institutions**

# ELV Management: Framework Agreement

## Public Authorities:

Ministry of the Environment  
Ministry of the Economical Development



Ministero dell' Ambiente  
e della Tutela del Territorio e del Mare



Ministero dello  
Sviluppo Economico

## Industrial chain



federaicpa



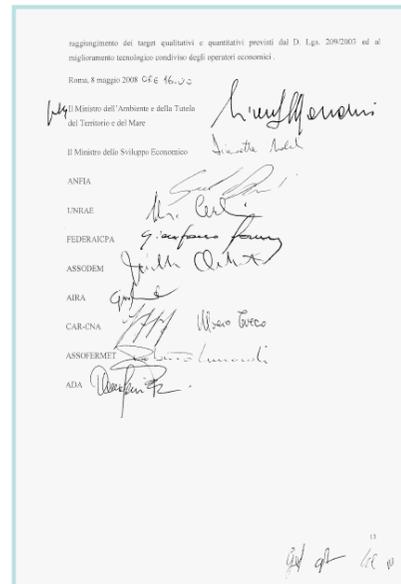
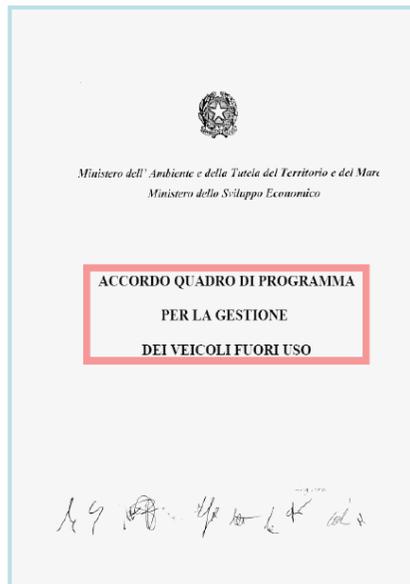
A.I.R.A.  
Associazione Industriale Riciclatori Aut



ASSOFERMET



**Officially work together to fulfill the EU target**



On **May 8th 2008**, the Ministry of the Environment, the Ministry of the Economical Development and 32 Responsible of the interested Associations signed the **Framework Agreement on ELVs**.

The document is the first example in Europe of official Agreement in order to:

- improve the ELV Management
- obtain the maximum of efficiency both from the environmental and industrial point of view



# ELV Management: Framework Agreement

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## Strong points and innovations of the Agreement:

- ▶ Team formed from great industry until Small Medium Enterprises
- ▶ Each economic operator has a specific role in the chain
- ▶ Awareness that the improvement of each actor of the chain give good results to the global system efficiency
- ▶ Benefit of the efficiency of the proposed solution coming from deep KH of the single economic operator
- ▶ Good approach and availability of the Public Italian Institutions increases the legislative and organizational instruments to achieve the final goal



**Maximum environmental efficiency in coherence with industrial competitiveness at national and international level**

# ELV Management: Framework Agreement

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## Current results

Legislative instruments:

Opening of three **technical Working Groups** on the following topics:

- Composition, thresholds and **car-fluff** management;
- Analysis and market demands of the **non metal materials** separated from ELV;
- **Energy recovery** of the car fluff.

Up-to-date working results:

- Increase of the **qualitative level** of the whole chain, of the single operators and the treatment activities through cross-check activities and waste traceability
- Recycling and Recovery Italian **quota achievement** – Realization in Italy of a **Statistical Trial 2006**;
- Start of the **TARGET FLUFF Project** inside the Legislative Decree INDUSTRIA 2015 – Energy Efficiency. The goal of the project is the realization of plants of post - shredding technologies and energy recovery.

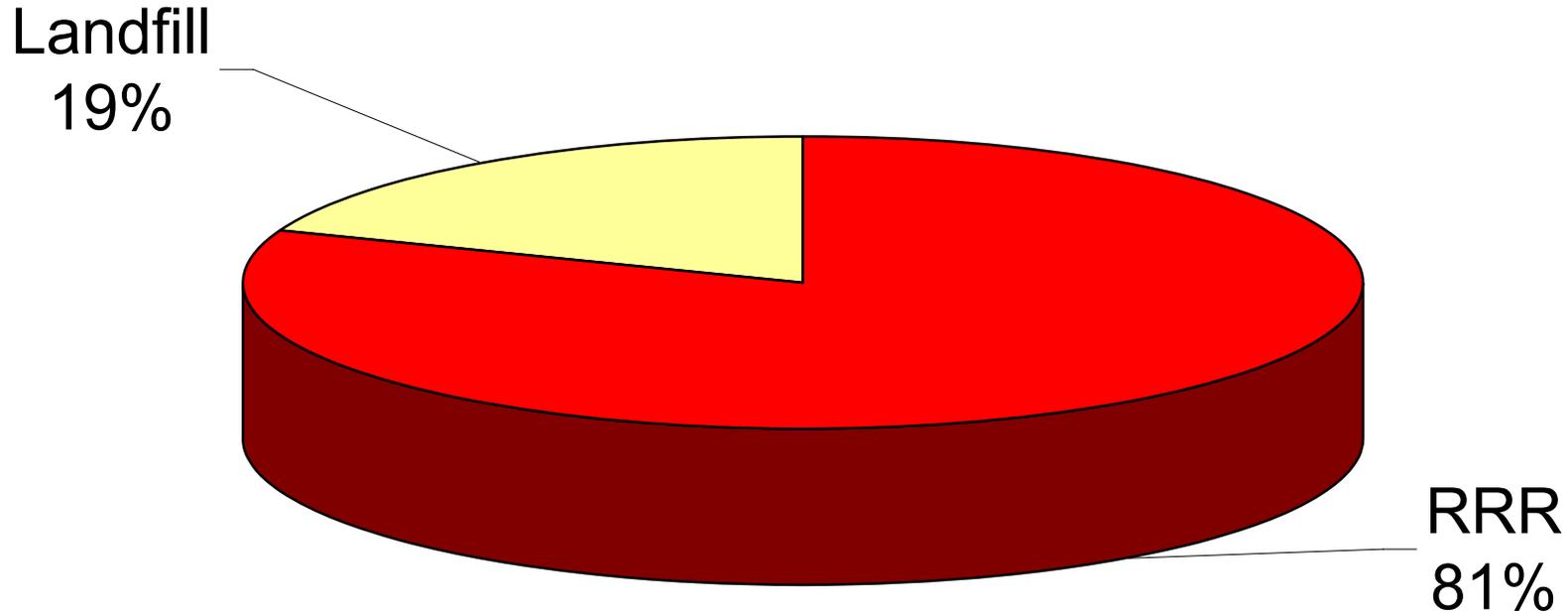


**Movie of the  
Statistical Italian Trial  
2006  
(English version)**

# Framework Agreement: Recycling & Recovery Quota in Italy

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## Final Italian Trial “2006” Results



The statistical Italian Trial 2006 demonstrates the achievement of the Recycling Quota requested by EU directive from 2006 on.

This result is absolutely coherent with the industrial reality operated by a large numbers of dismantlers, crushers, shredders and recyclers.

# Framework Agreement: Recycling & Recovery Quota in Italy

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## Observations about Italian situation:

- Italy is a poor raw materials country, for this reason has a long tradition on the materials recycling, in special metals;
- numbers, dimensions and competencies of the Italian economic operators allow to face the actual volume of ELV:
  - ✓ 1600 dismantlers,
  - ✓ 350 crushers and metals traders,
  - ✓ 30 shredders,
  - ✓ thousands of companies active in the recycling of metals and non metals materials;
- The Statistical Trial 2006 shows the ability of reuse and recycling in Italy
- The MUD format was modified by Public Authority - DPCM del 2/12/2008 and will be operative from MUD 2009



# Framework Agreement: Recycling & Recovery Quota in Italy

## INDUSTRIA 2015 – Energy Efficiency: TARGET- FLUFF Project

Articles 10 and 11 of the FRAMEWORK AGREEMENT concern “Research and technological development activities” and “Activities of development of pilot plants” respectively.

**The TARGET FLUFF project is the first answer.**



**Objective:** setting up of 3 different pilot plants at industrial scale for the car fluff treatment from ELV, using the **pyro-gasification** process which :

- Ensure the best performances of energy and environmental efficiency and economical sustainability
- Give autonomy to the involved industrial partners relative to the problem of landfilling
- Bring to the achievement of the national target of energy recovery (5% from 2006 and 10% from 2015) and help the achievement of the re-use and recovery target (85% from 2006 and 95% from 2015)

### Partnership TARGET FLUFF Project

- Centro Ricerche Fiat
- Feralpi Group
- CRS (CFF Recycling Group)
- Centro Rottami & Centro Sviluppo Materiali



## Conclusions

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The Framework Agreement is the **right instrument** to solve the critical aspect of the ELV chain in Italy

It is the **first example in Europe** of active collaboration between Public Institutions and Economic Operators on waste management.

Fiat Group Automobiles is ready to give contribution to the success of this collaboration.

The **results** of the Framework Agreement are useful to:

- **achieve** the recycling and recovery **targets** of the EU directive
- drive the attention of the institutional stakeholders on the necessity of **more comparable and harmonized ELV measurement targets** among Member States

