



LIFE18 ENV BE 000368

LIFE PlasPLUS

Recycling of high-quality secondary thermoplastics and critical raw materials coming from mixed WEEE and EoL vehicles

Kick off Meeting

Meeting Venue: : Comet Traitements – Obourg - Belgium

Date: 20th January 2020



CENTRO
RICERCH
FIAT





LIFE18 ENV BE 000368 - LIFE PlasPLUS

Project Location: Obourg – Belgium

Project Budget:

Total amount: 3,170,420 Euro

% EC Co-funding: 1,430,450 Euro
(45.12% of the total budget)

Duration: 01/07/2019 - 31/12/2022



Coordinating Beneficiary:



Associated Beneficiaries:





LIFE18 ENV BE 000368 - LIFE PlasPLUS

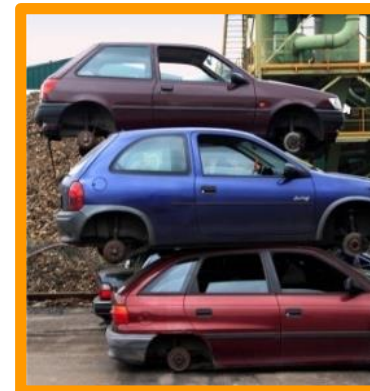
OBJECTIVES & SCOPE



Discarded as EoL products

Mixed plastics from
WEEE

Mixed plastics from
automotive shredder
residues





LIFE18 ENV BE 000368 - LIFE PlasPLUS

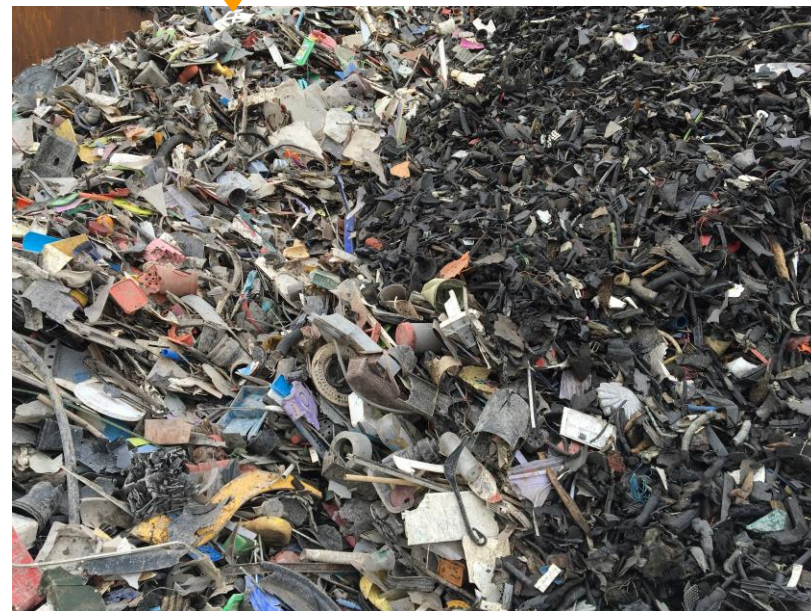
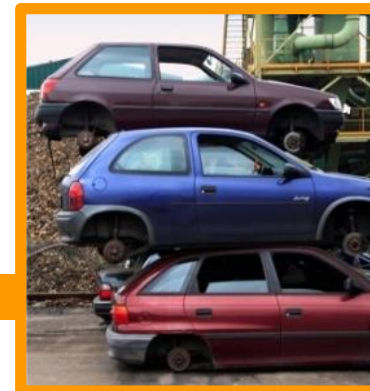
OBJECTIVES & SCOPE



Discarded as EoL products

Mixed plastics from WEEE

Mixed plastics from automotive shredder residues





LIFE18 ENV BE 000368 - LIFE PlasPLUS

OBJECTIVES & SCOPE



Discarded as EoL products

Mixed plastics from
WEEE

Mixed plastics from
automotive shredder
residues



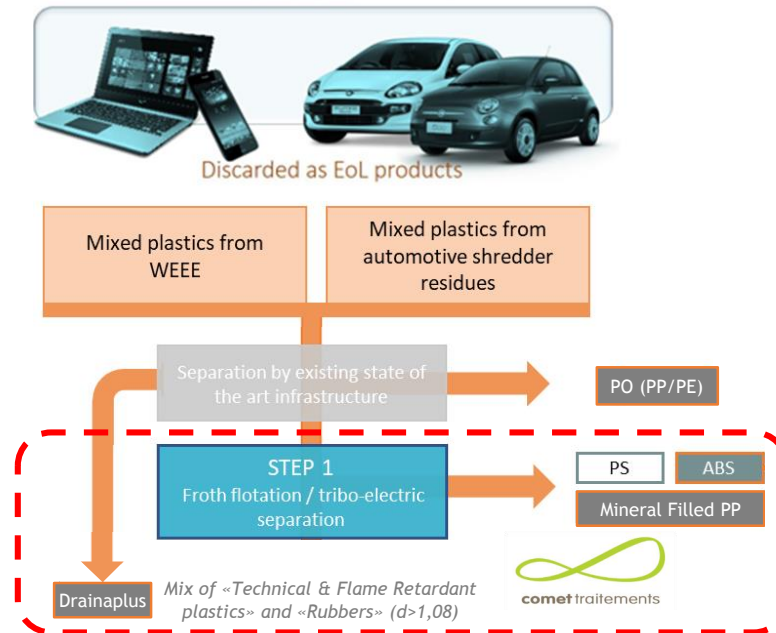


LIFE18 ENV BE 000368 - LIFE PlasPLUS

OBJECTIVES & SCOPE

Step 1 :

Production of high purity regrinds thermoplastics





LIFE18 ENV BE 000368 - LIFE PlasPLUS

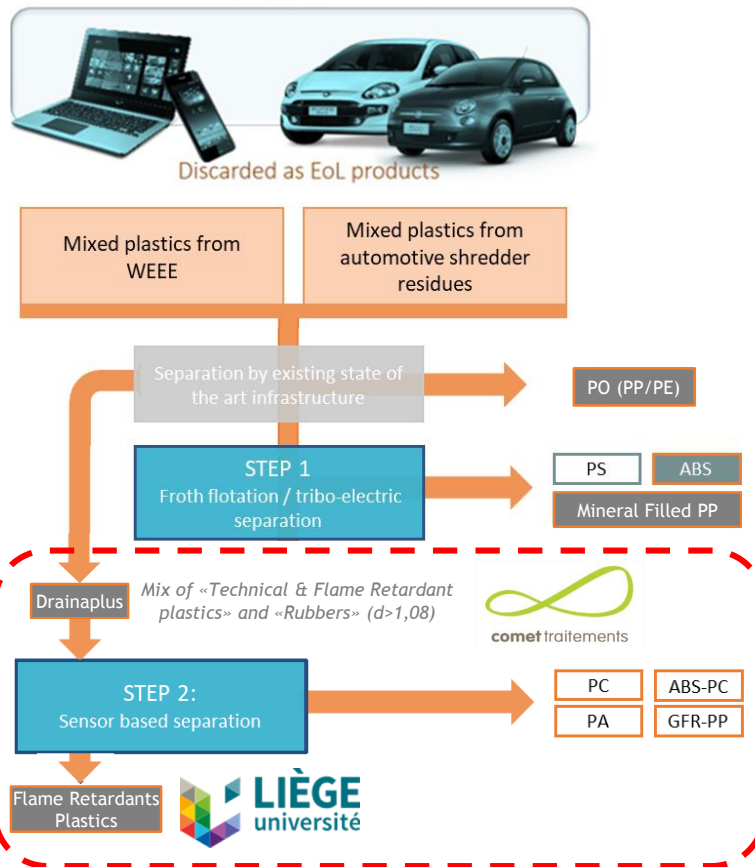
OBJECTIVES & SCOPE

Step 1 :

Production of high purity regrinds thermoplastics

Step 2 :

Sorting and separation of Flame Retardant Plastics (FRP) to prevent landfilling





LIFE18 ENV BE 000368 - LIFE PlasPLUS

OBJECTIVES & SCOPE

Step 1 :

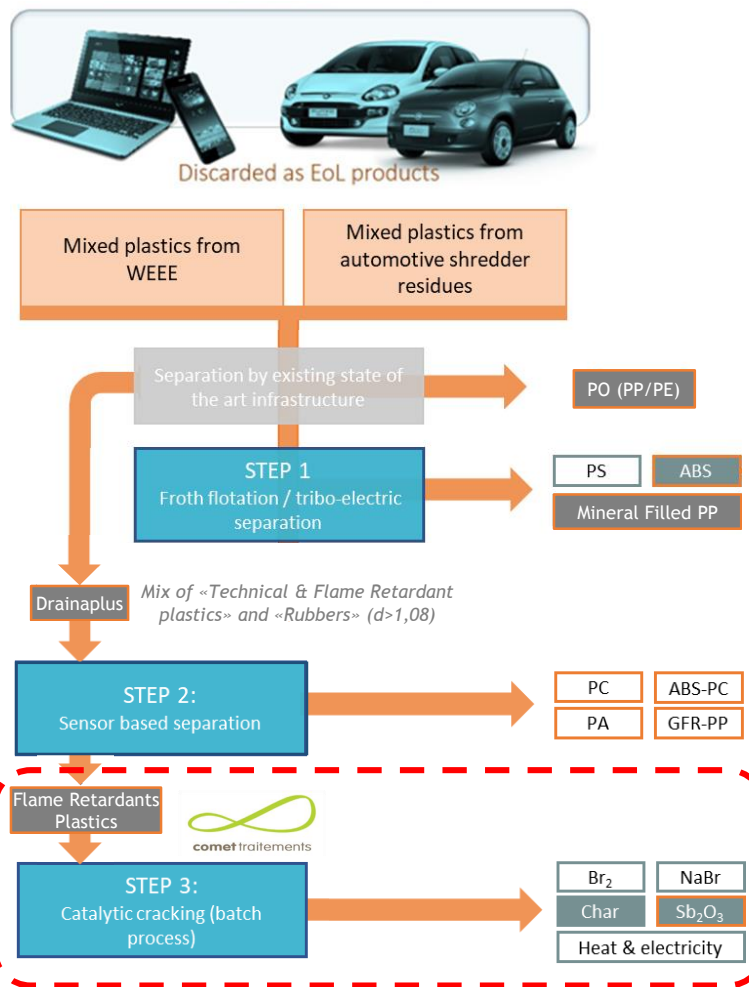
Production of high purity regrinds thermoplastics

Step 2 :

Sorting and separation of Flame Retardant Plastics (FRP) to prevent landfilling

Step 3 :

- Catalytic cracking of FRP





LIFE18 ENV BE 000368 - LIFE PlasPLUS

OBJECTIVES & SCOPE

Step 1 :

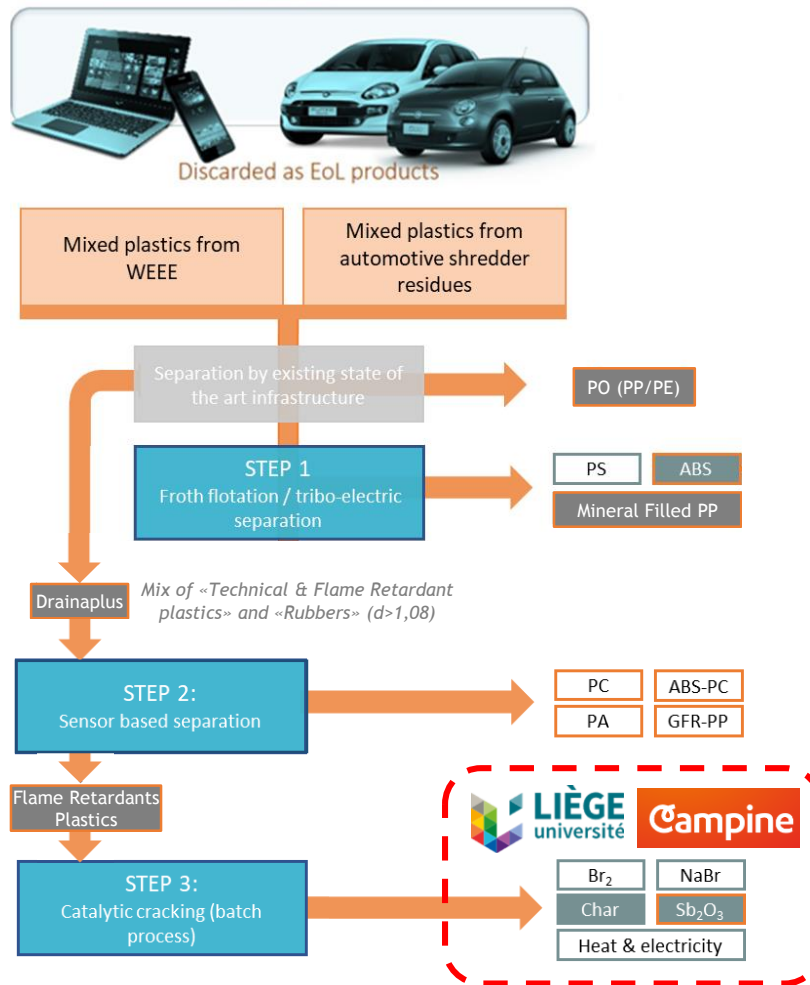
Production of high purity regrinds thermoplastics

Step 2 :

Sorting and separation of Flame Retardant Plastics (FRP) to prevent landfilling

Step 3 :

- Catalytic cracking of FRP
- Recycling of by-product antimony





LIFE18 ENV BE 000368 - LIFE PlasPLUS

OBJECTIVES & SCOPE

Step 1 :

Production of high purity regrinds thermoplastics

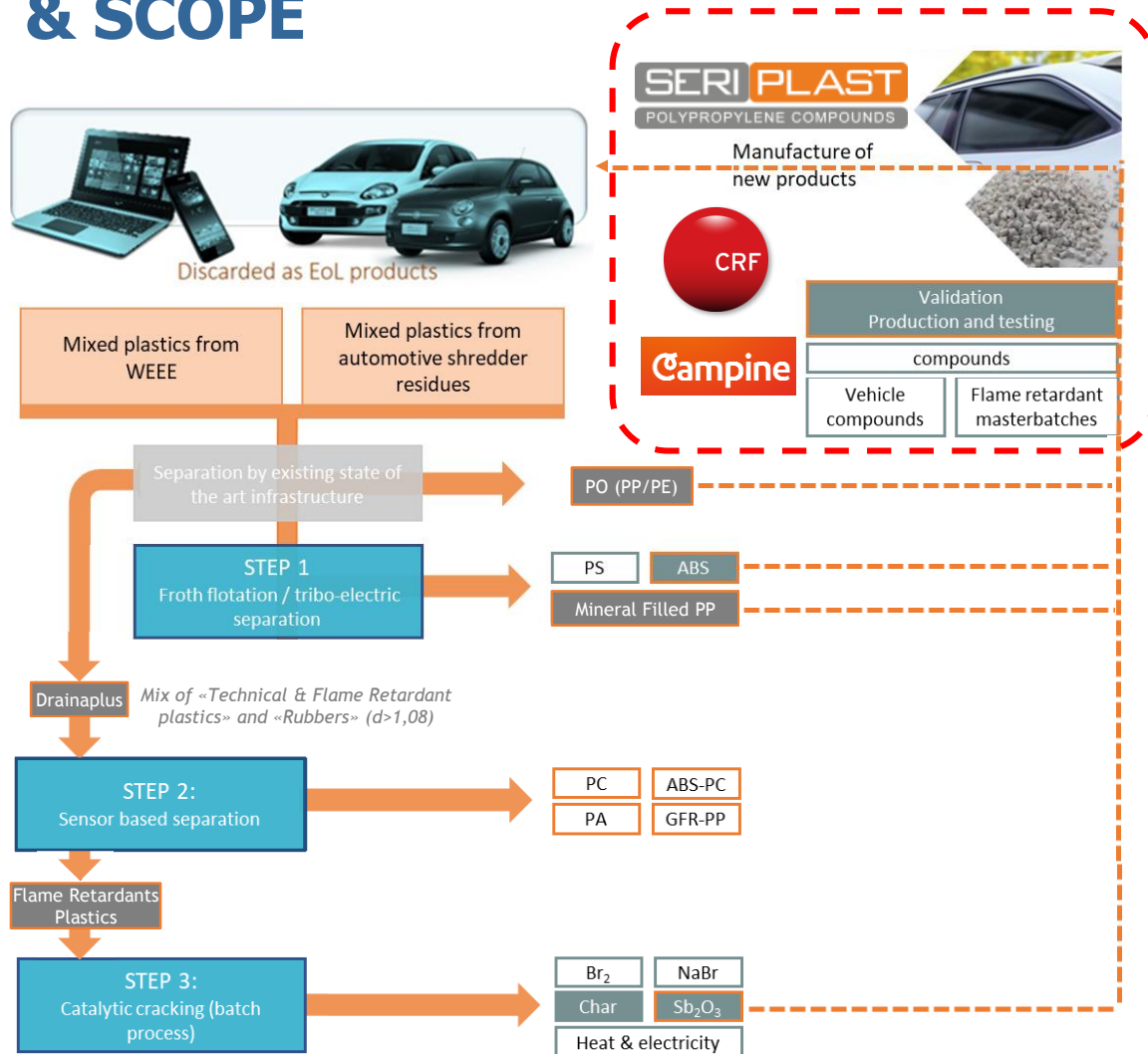
Step 2 :

Sorting and separation of Flame Retardant Plastics (FRP) to prevent landfilling

Step 3 :

- Catalytic cracking of FRP
- Recycling of by-product antimony

Validation, Production & Testing





LIFE18 ENV BE 000368 - LIFE PlasPLUS

OBJECTIVES & SCOPE

Step 1 :

Production of high purity regrinds thermoplastics

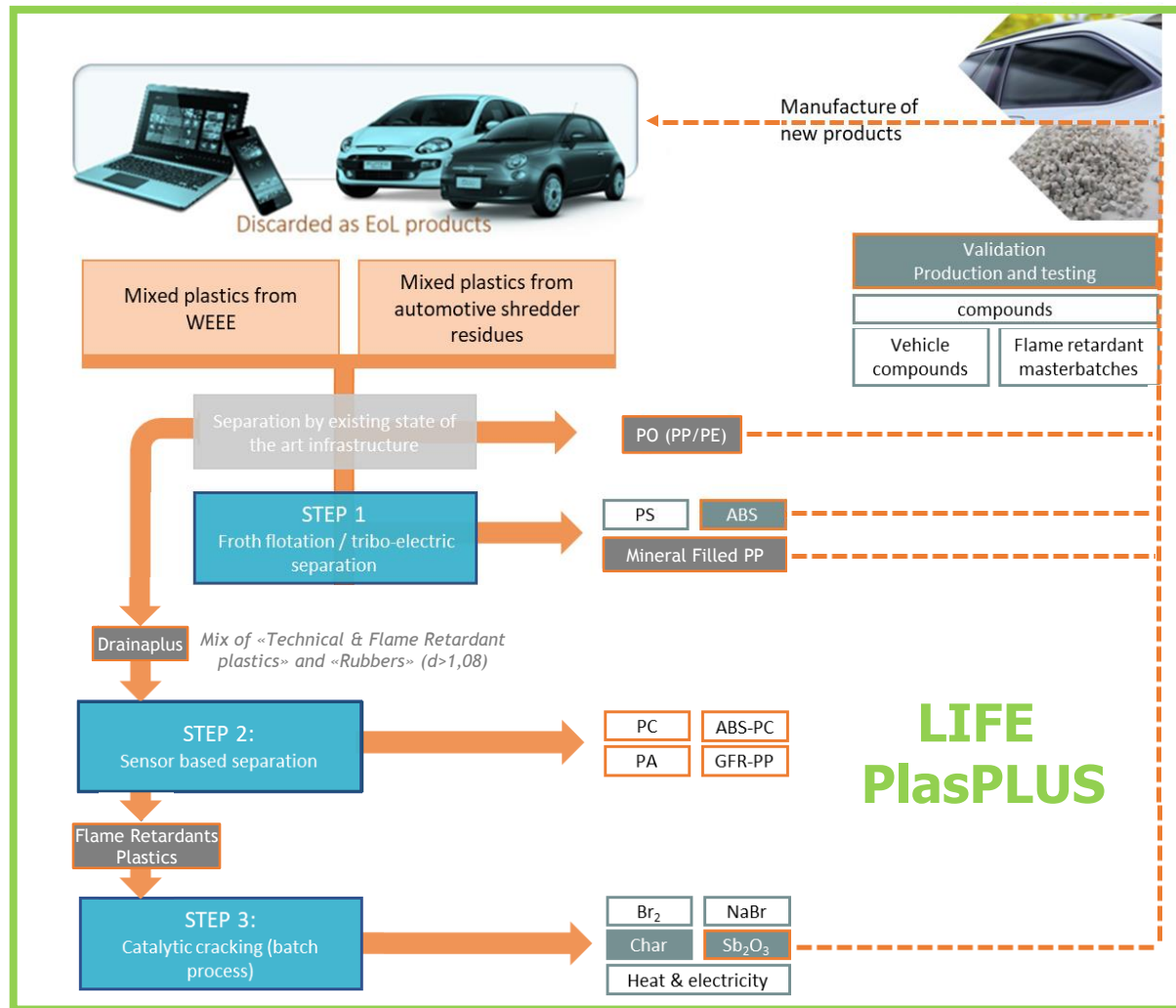
Step 2 :

Sorting and separation of Flame Retardant Plastics (FRP) to prevent landfilling

Step 3 :

- Catalytic cracking of FRP
- Recycling of by-product antimony

Validation, Production & Testing



LIFE PlasPLUS



LIFE18 ENV BE 000368 - LIFE PlasPLUS

EXPECTED IMPACTS

	End of Project	5 years after project
CO2	1110 tons CO2-eq/year	20,165 tons / year
Waste Reduction	1048 tons/year	31,251 tons / year
Recovery of Sb	0.5 tons/year	108 t Sb
Raw materials (ABS/PS/FPP)	922.5 tons/year	16,858 tons / year
Reduced water consumption	608,520 m3 / year	11,055,000 m3 / year
Reduced energy consumption	8,851,200 KWh / year	160,800,000 KWh / year



POLICY IMPLICATIONS

- **ELV Directive (2000/53/EC)**

The project addresses the recycling and reuse of ELV components.

- **Landfill Directive (EU 2018/850)**

The project aims at diverting a wider proportion of ELV and WEEE plastics from landfill.

- **European Strategy for Plastics in a Circular Economy (COM/2018/028 final)**

The project prevents the downcycling of high-quality secondary thermoplastics waste from ELVs and WEEE, an underexploited reserve of valuable plastic fractions.

- **The WEEE Directive ((EU) 2012/19)**

The project tackles the problem of FRPs in the WEEE recycling stream, by enabling these components to be identified from the sinking plastic fraction in an automated and rigorous manner.

- **EU Raw Materials Initiative (COM/2008/0699 final)**

The project demonstrates a recycling route for Sb, a Critical Raw Material with a very high supply-risk.



LIFE18 ENV BE 000368 - LIFE PlasPLUS

CONTINUATION (REPLICATION, TRANSFER, MARKET UPTAKE)

- *Upscale the process to receive and treat the full amount of brominated and non-brominated fluff produced by its plant (50kt/y)*
- *Replicate PlasPLUS concept at 5 other shredder sites in EU treating mixed plastic waste*
- *Separate PS coming from rigid packaging or gardening waste when it is mixed in the shredder with ELV and WEEE plastic mixes (Froth flotation)*
- *Transfer PICK IT to other waste management sectors (e.g. paper in need of automated recognition and multi-class sorting).*