



Potencial Energy Recovery From Aviation Catering Organic Waste in Spain. The Zero Cabin Waste Project.

UNESCO Chair in Life Cycle and Climate Change ESCI-UPF

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United Nations
Educational, Scientific and
Cultural Organization



School of International Studies

UNESCO Chair
in Life Cycle and
Climate Change









ZERO CABIN WASTE
LIFE15ENV/ES/000209



This Project is co-financed
by the European Union
through the LIFE Program



(LIFE/ENV/ES209) **DURATION:** Start: 01/09/16 - End: 31/12/19

Partner	Role in the project
	Coordinator & General project management. Leader in several preliminary and implementation actions and dissemination activities. Separation of waste onboard.
	Caterer of Iberia. First receptor of offloaded waste and responsible for first controls and further waste management. Leader of several preliminary and implementation actions. Contribute to technical monitoring and dissemination.
	Responsible for sub actions concerning mainly waste characterizations, trainings and awareness-raising materials. Also, in charge of conclusions and recommendations. Contribute to technical monitoring and dissemination.
	Involved in several actions concerning waste management opportunities and design. Responsible for pilot action B5 (treatment of organic fraction Cat.1 waste). Contribute to technical monitoring and dissemination.
	Mainly responsible for the management of waste in recycling plant and valorization process. Contribute to technical monitoring and dissemination.
	Involved in different actions and sub-actions as to monitor LCA related parameters. Responsible for developing a state of the art LCA for aviation industry and for compiling and monitoring project performance indicators.



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7,700

Million passengers in 2016. (ACI,2017)

1.43 kg

Waste per passenger and flight (Godson, 2014)

11

Million tonnes of Waste in 2016.

Create a sustainable model to reduce, re-use and recycle waste collected in airplane cabins and set the basis for future replication by other airlines.



- Iberia flights landing in Madrid.
- 2,198 tonnes of waste generated in 2016.
- Waste characterizations. 145 flights analysed.
- Different waste categories.

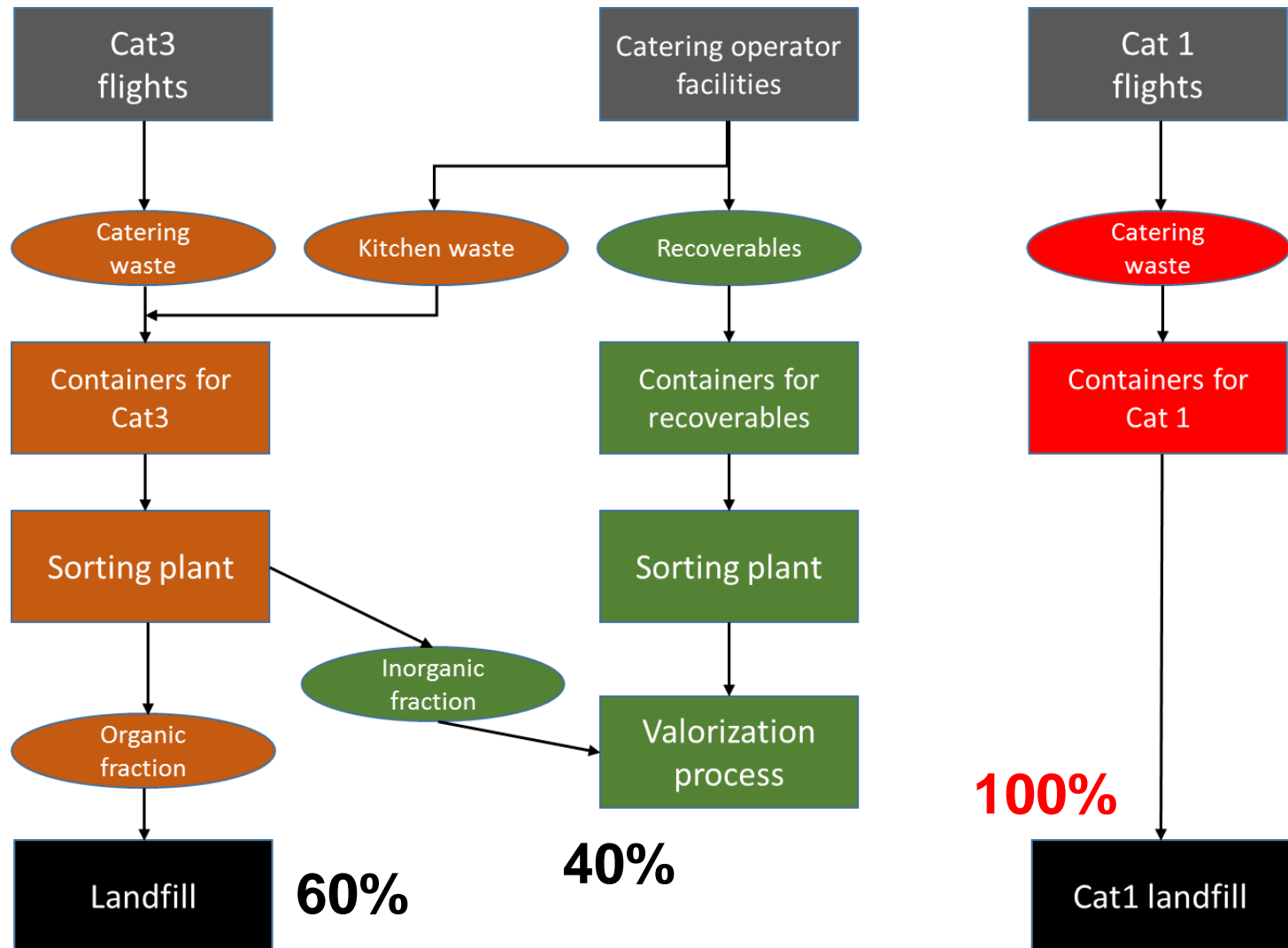


Category 3

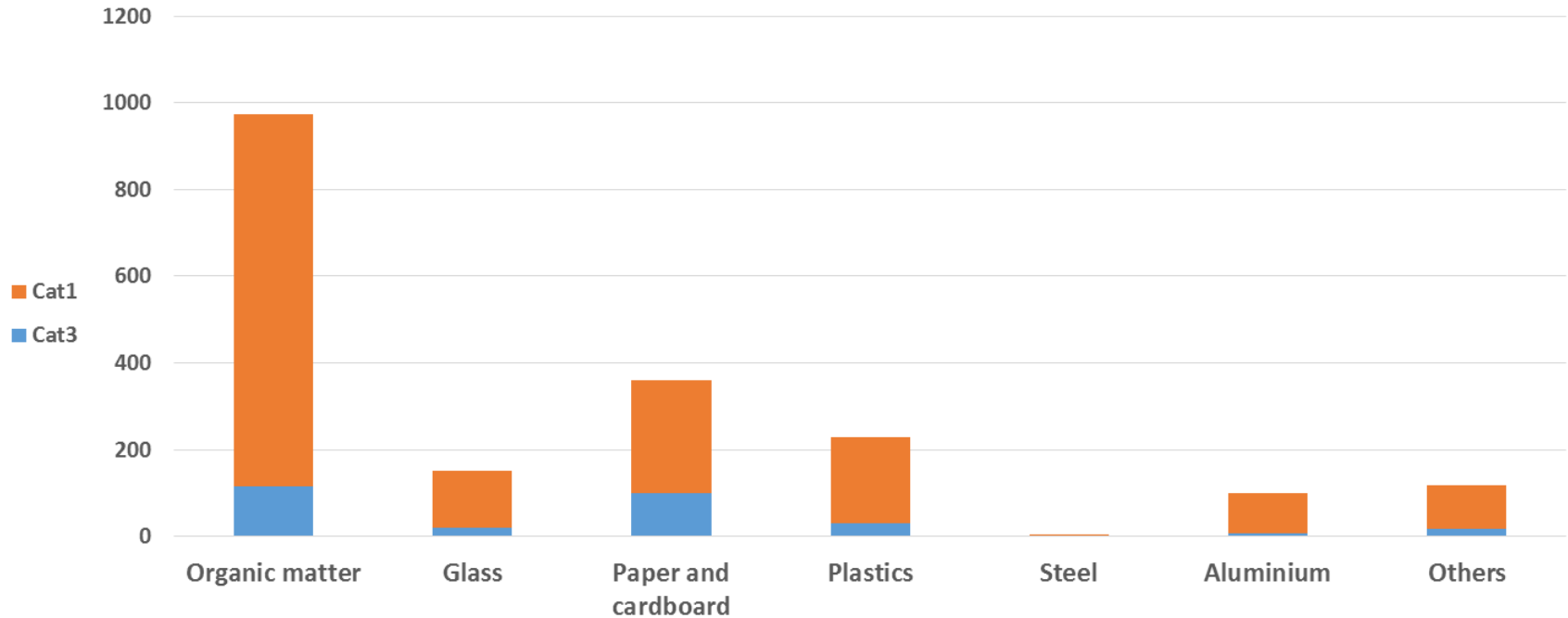
- Flights from EU countries.
- Can be managed like MSW.

Category 1

- Flights from NO EU countries.
- (EC) 1069/2009
- Potentially hazardous for human and animal health.
- Must be disposed in an authorised landfill.

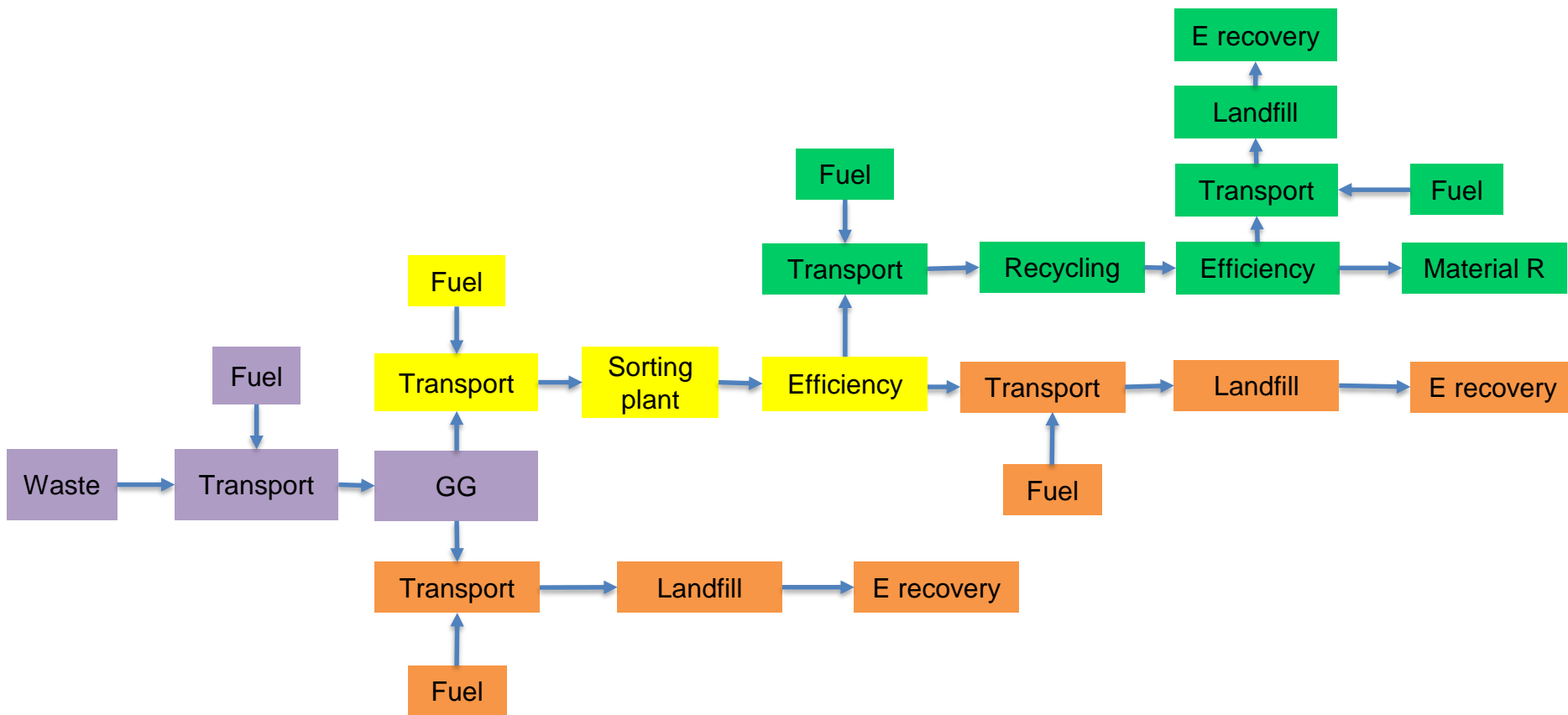
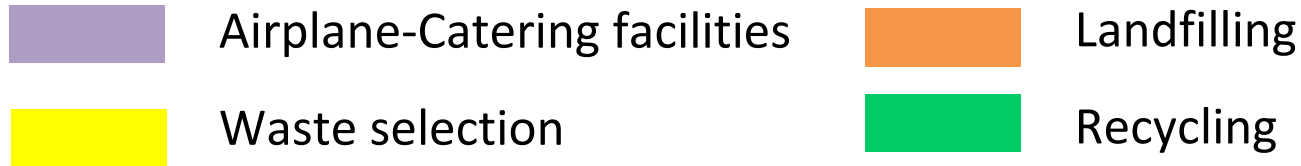


Waste distribution (tn)

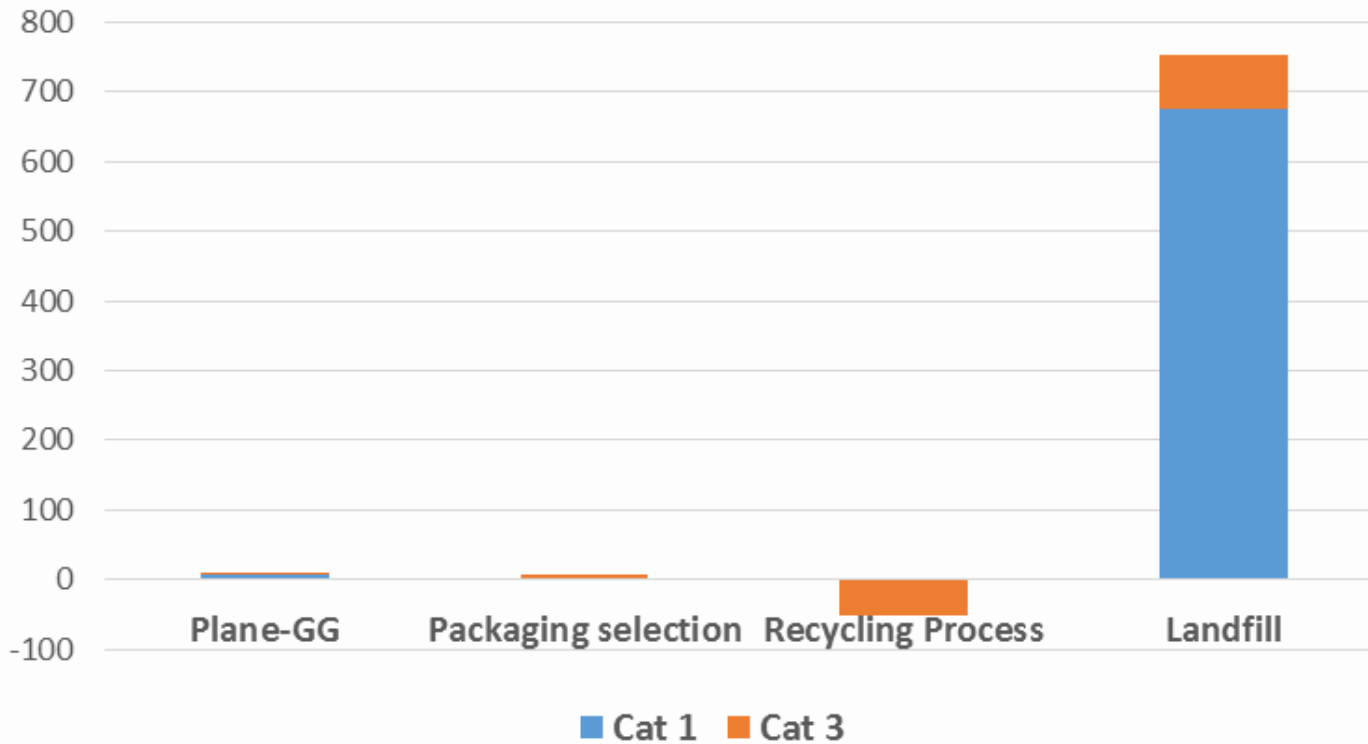


26% of the O.M. has not been manipulated

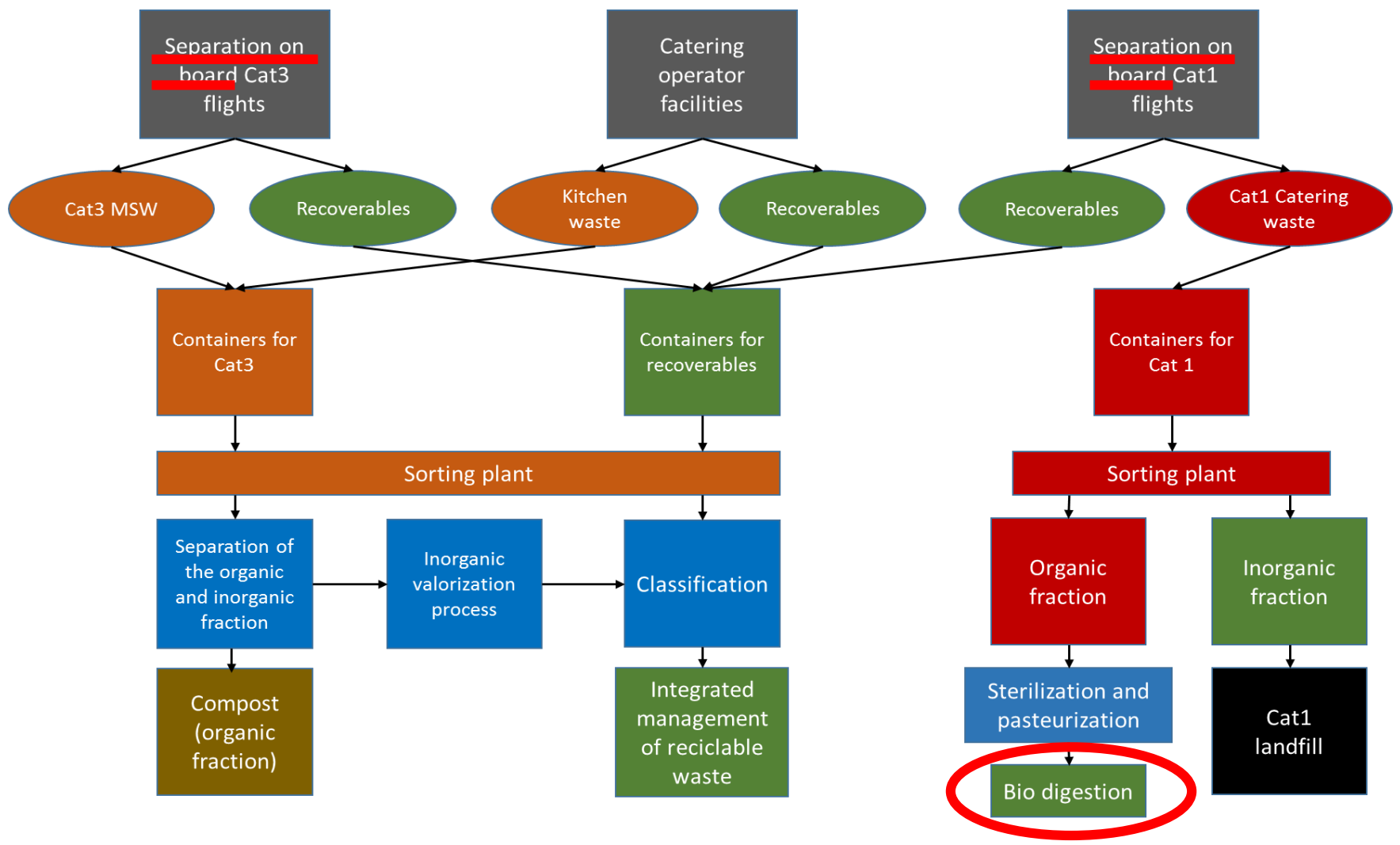




tCO₂eq management in 2016 total waste (1.939 t)



60% of the CO₂eq. emissions come from the O.M. in landfill.



Objective: Divert **80%** of the waste from landfill to **recycling** and **valorization** process.



858.6 t/year



49,173.7MJ/year

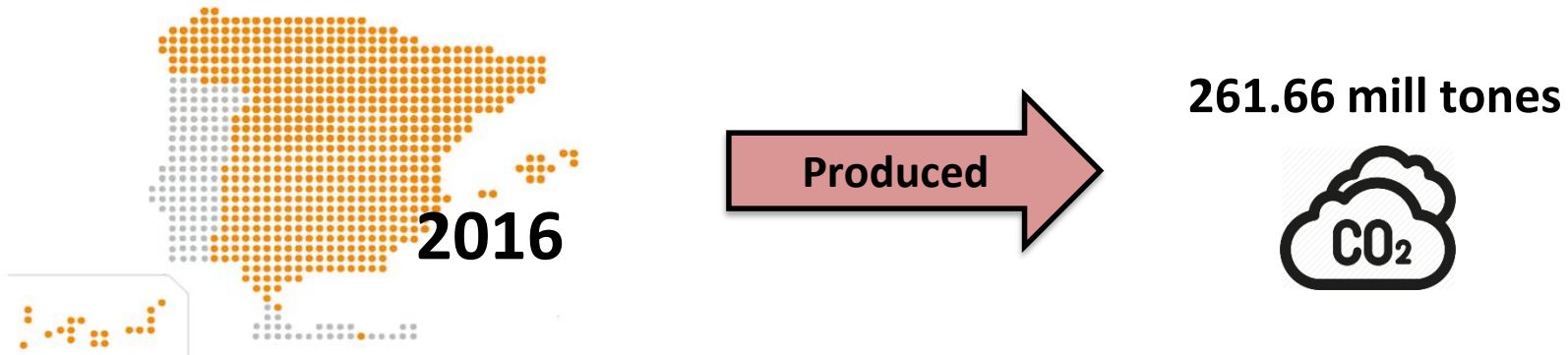


295,042.5 MJ/year

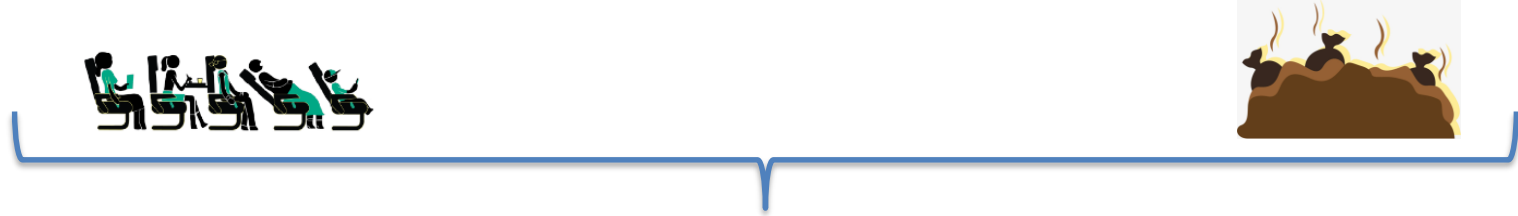
245,868.79 MJ/year **net production**

Potential savings

The Zero Cabin Waste Project.



In total **230 mill passengers** travelled in Spain generating **53,820 tones O.M.**



17,570 tones CO₂

0,67% CO₂

Of the total CO₂ emissions of Spain



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Thank you for your attention,



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