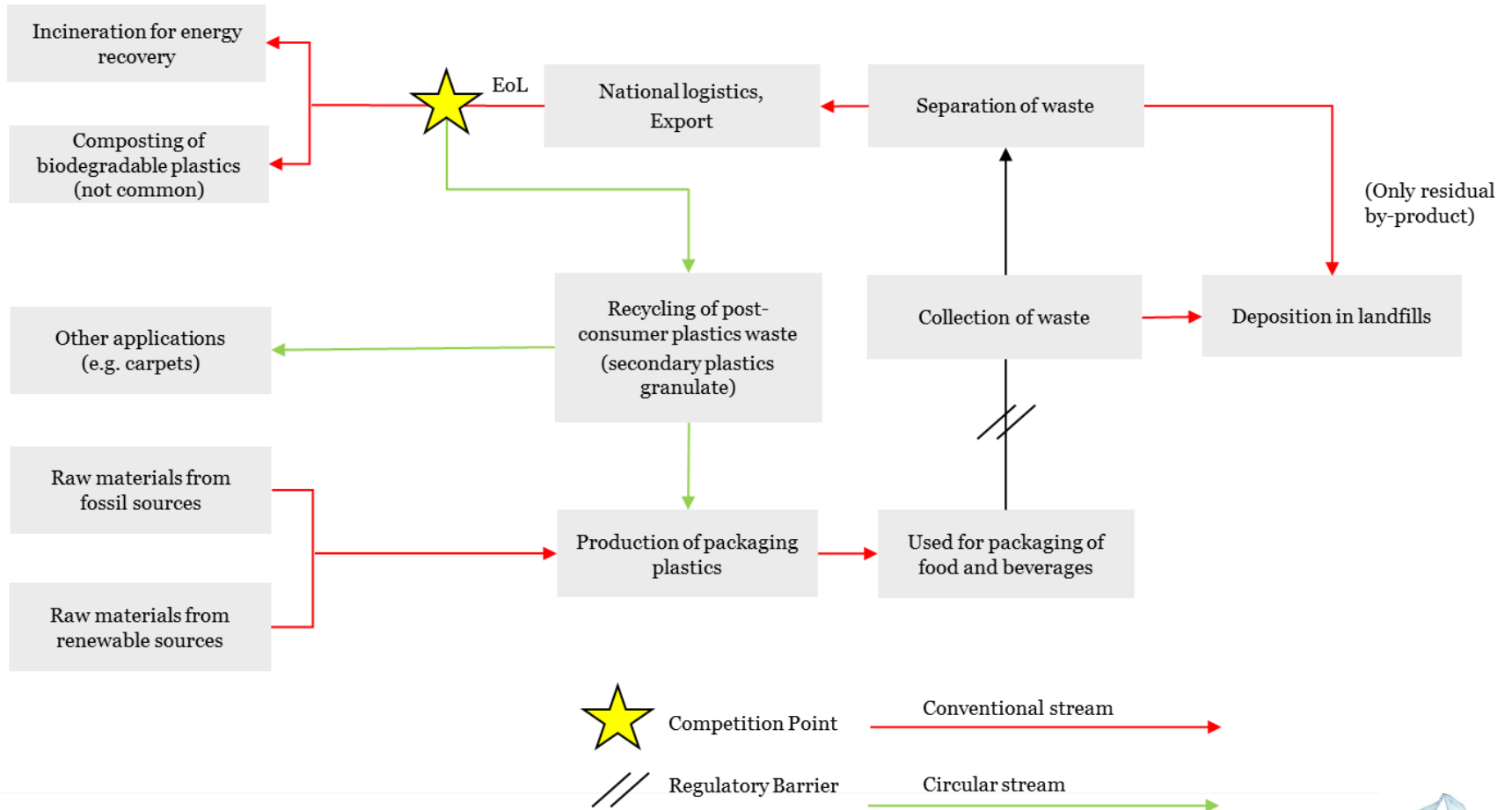




Regulatory barriers for the circular economy

*Recycling of packaging for food and beverages – plastics and polymers
thinkstep & Wuppertal Institute, Margarida Gama (thinkstep)*

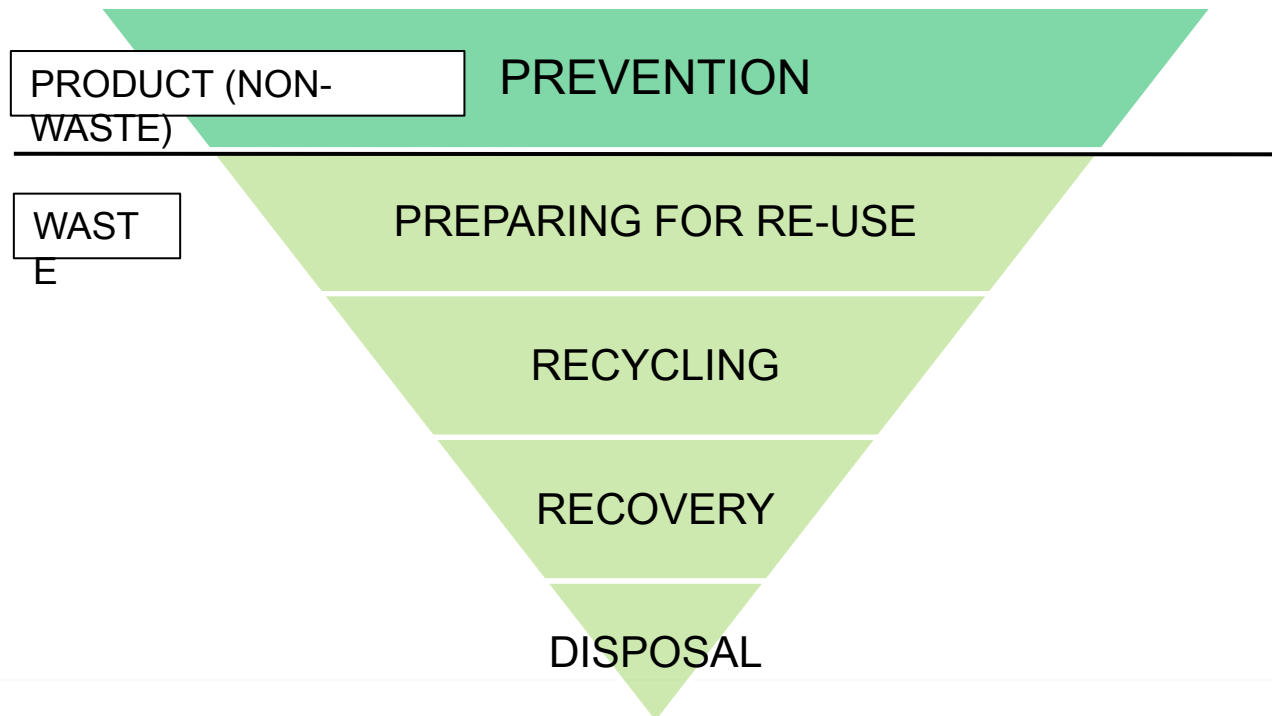
Overview





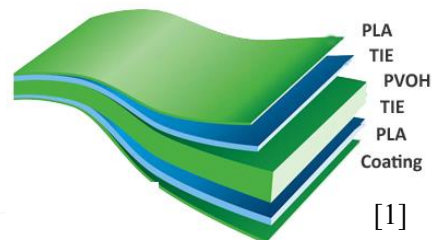
Main regulatory barrier

- Lacking implementation of the waste hierarchy (Directive 2008/98/EC on waste - Waste Framework Directive - WFD)



Solutions proposed

- Create further guidelines / standards for design
- Revise requirements to classify plastics wastes as ‘end-of-waste’ (Waste Framework Directive)
- Control exports of recyclable plastics waste
- Identify main sources of insufficiencies / inefficiencies in collection systems in EU
- Establish clear requirements and standards for collection / separation systems in EU
- Ban landfilling of plastics



Effects of regulatory barrier



[4]

- Economic effects:
 - *Costs and benefits depend on Member-state and industry sector. General advantages of overcoming this barrier:*
 - **Producers:** *cost savings associate with the price of secondary granulates are estimated in app. 10% when compared with primary**
 - **Collectors / separators:** *contributes to better allocate resources and to define potential funding to support implementation*
 - **Plastic recyclers:** *more stable input of plastics (quality, quantity) builds trust on investments for improving capabilities*
 - **Plastic incinerators:** *more stable input of goods to incinerate allows more precise prediction on the amounts of energy generated and (eventually) higher calorific content of the input*

* Based on the average prices for primary and secondary PE, PP and PS for 2013

Effects of regulatory barrier

- Environmental effects:
 - *Typically, recycling is better than incinerating*
 - *BUT, a holistic perspective on the whole life cycle of a product is essential (design!)*
 - *Considering the full life-cycle, the best option will have associated:*

Less exploitation of resources



[5]

Lower emissions



[6]

Less pollution (reduce
littering / plastic debris)



[7]

Observations

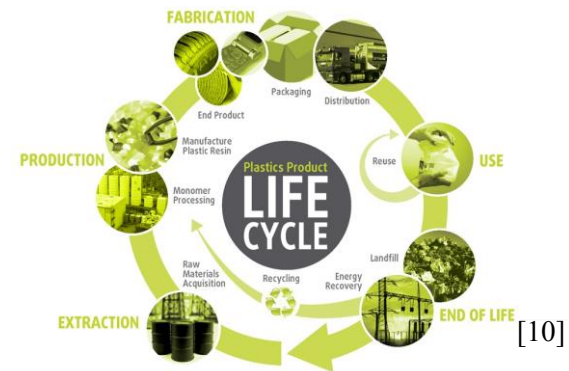
- In order to follow the waste hierarchy in the Waste Framework Directive, further regulation has to be considered
- Different stakeholders positions must be heard and supported
- All the phases of the life cycle of plastics have to be considered and understood before decision making on regulation and establishing priorities



[8]



[9]



[10]





Thank you!

Image Sources

- [1] http://www.bio4map.eu/imagenes/imagen_about.png
- [2] https://upload.wikimedia.org/wikipedia/commons/9/91/HK_Admiralty_Tamar_Park_s_Amphitheatre_refuse_waste_collection_bins_May-2013.JPG
- [3] <http://planetsave.com/wp-content/uploads/2014/10/Plastic-bottles-being-landfilled.png>
- [4] http://www.advancissurgical.com/wp-content/uploads/2013/10/Hemosep_cost-of-platelets_cost-of-blood_postoperative-bleeding.jpg
- [5] <http://www.vlahovicgroup.com/wp-content/uploads/oil-gas.jpg>
- [6] <http://www.uscnpm.org/wp-content/uploads/2015/09/carbon.jpg>
- [7] <http://www.lifegate.com/app/uploads/busta-nelloceano.jpg>
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- [10] <http://www.trinseo.com/-/media/Trinseo/Images/Sustainability/Sustainable-Operations/p35-life-cycle-logo.jpg?la=en>

