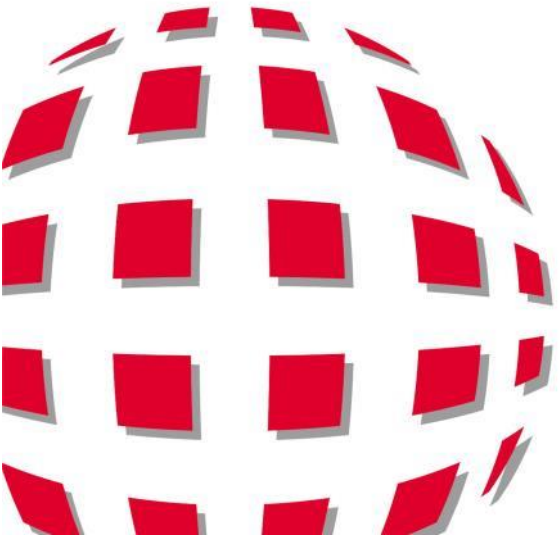
GRUPO LANTERO

COEXPAN Montonate



BIO PET

Sumirago, 16 Dec 2016

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1-BIO PLASTICS

Definition of a bio-plastic

(Definition given by *European Bioplastics Organizazion*):

a **bioplastic** is a kind of plastic obtained from renewable raw materials, or biodegradable, or both.

1-BIO PLASTICS

What it means «renewable» raw material?

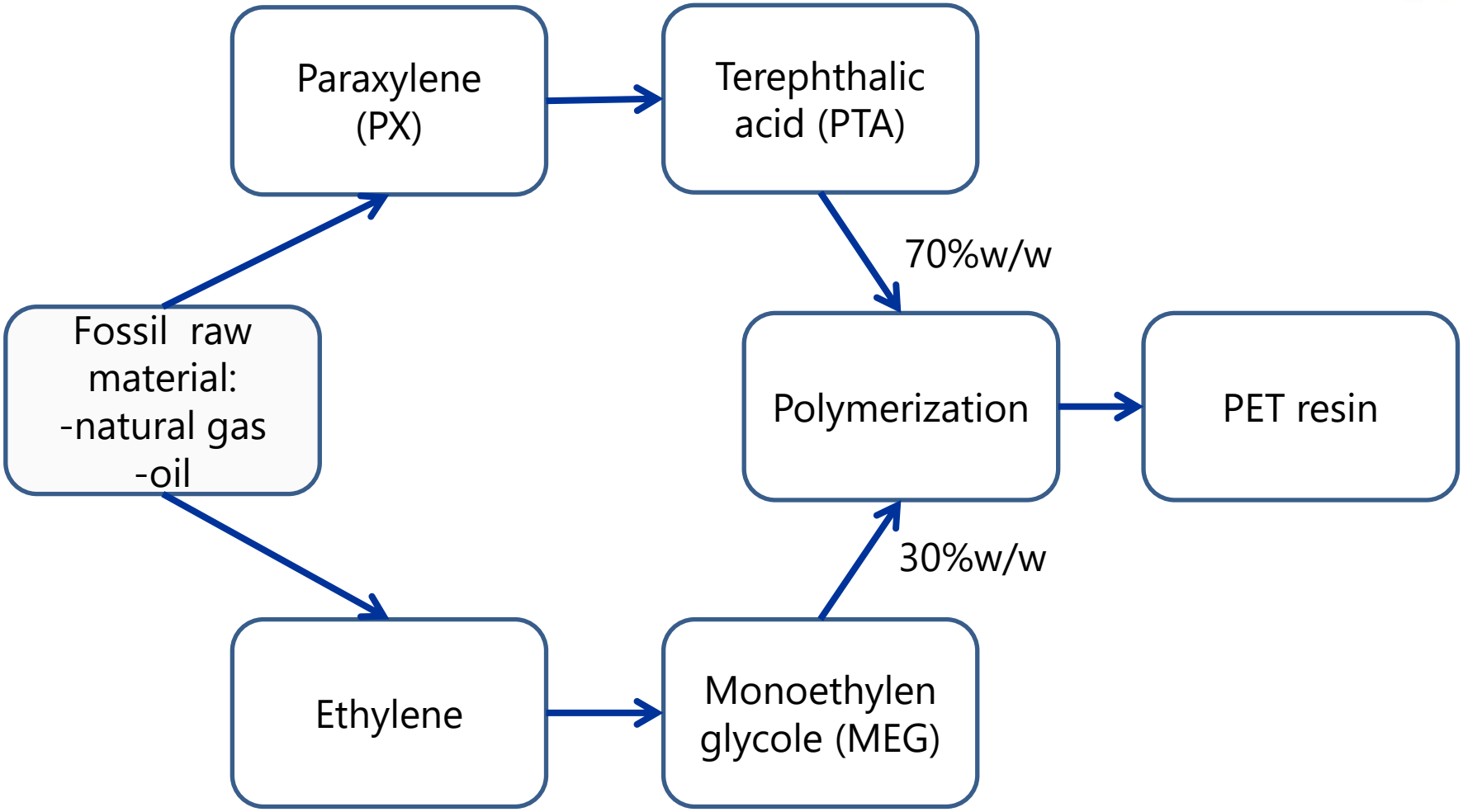
A renewable raw material is a biomass feedstock, i.e. any renewable, biological material that can be used directly as a fuel, or converted to another form of fuel or energy product.
Biomass feedstocks are the plant and algal materials used to derive fuels like ethanol, butanol, biodiesel, and other hydrocarbon fuels. Some examples are corn starch, sugarcane juice, crop residues such as corn stover and sugarcane bagasse, purpose-grown grass crops, and woody plants

Renewable raw materials contribute to sustainable development by reducing CO_2 emissions and replacing non-renewable raw materials, but they are not intrinsically sustainable.

There is a large debate going on about renewable raw materials, regarding issues such as **competition with food**, **water use and land use** for the growth of the biomass feedstock , and **biodiversity reduction**

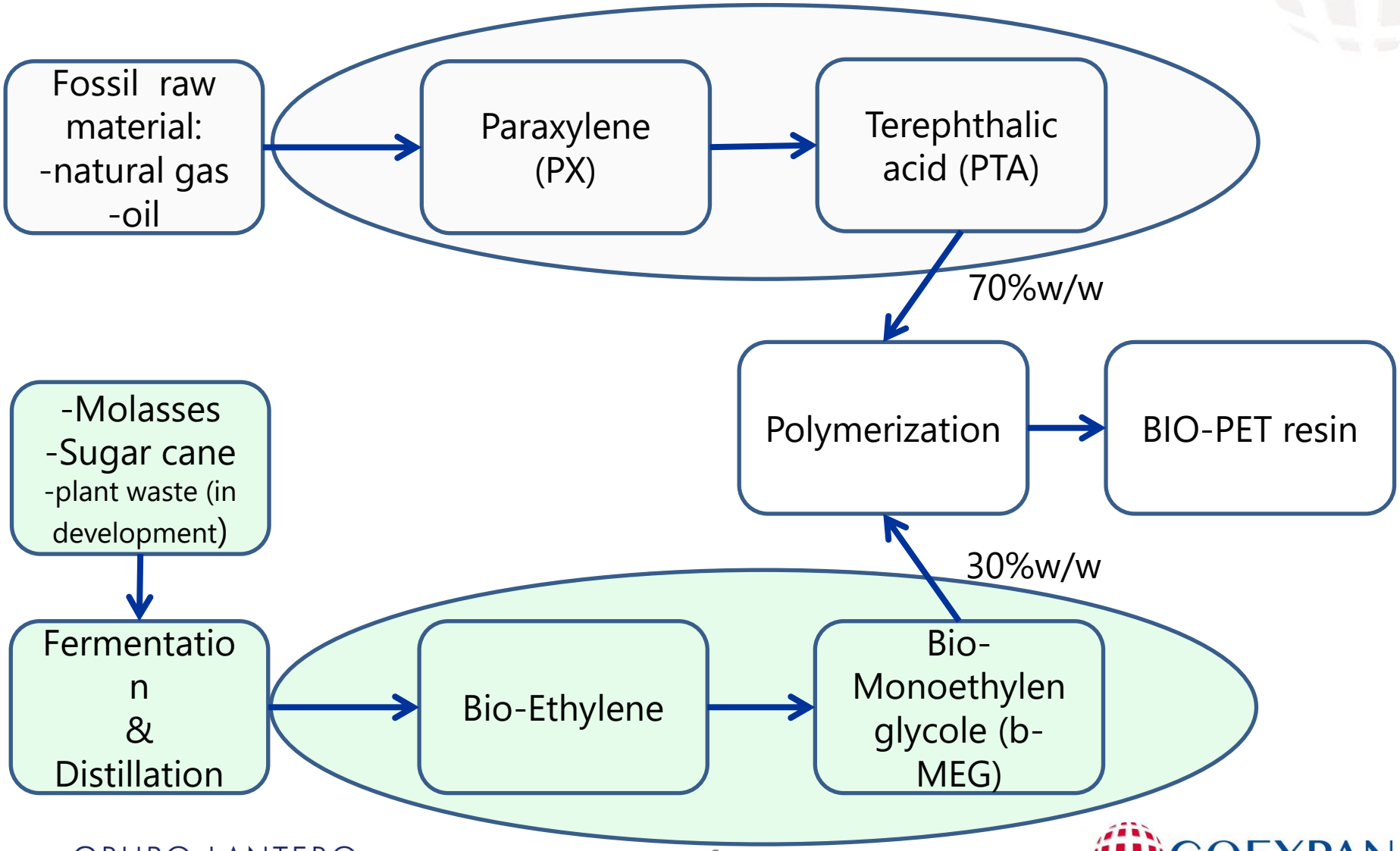
2-BIO PET

How CLASSIC PET is made:



3-BIO PET

How BIO PET is made:



3-BIO PET

ACTUAL TECHNICAL SITUATION:

-The resin is NOT Biodegradable and NOT compostable

-The resin behaves exactly as «classic» PET, no technical issues

-Reduction of the fossil sources dependancy

Around 40% CO_2 reduction in the product LCA

ACTUAL COMMERCIAL SITUATION:

-The resin is commercially available

-Two suppliers today on the market manufacturing the resin

-Price around 30% higher than standard PET

NEXT STEPS (under development):

-MEG from plant waste ……(no impact due to resources divertion)

-PX/PTA from biomass/non fossil source……....100% Bio-PET

Thank YOU!