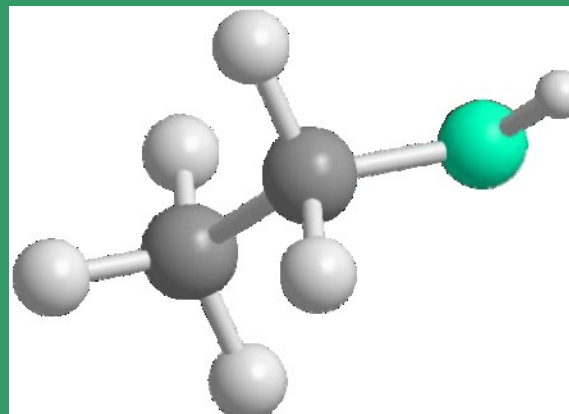


ADVANCED BIOFUELS and INNOVATIVE SOLUTIONS IN GREEN CHEMISTRY

ECONOMY THROUGH BIOFUELS AND
CHEMICAL PRODUCTION AT A CELLULOSIC
BASED FACILITY



Sustainable Bioeconomy



Biobased chemicals

Acetaldehyde

Ethyl acetate

Advanced bioethanol

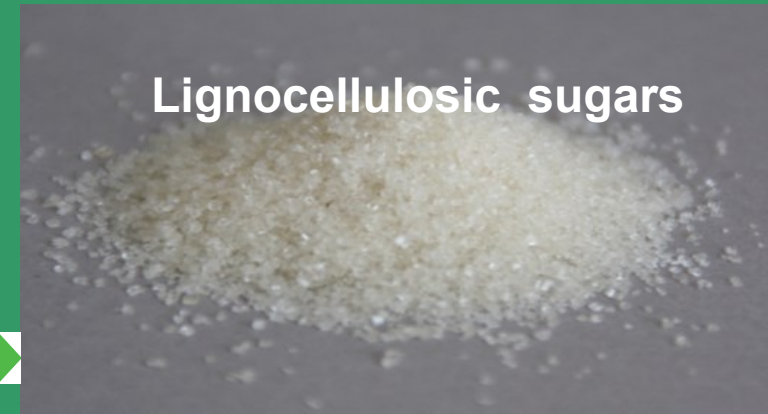
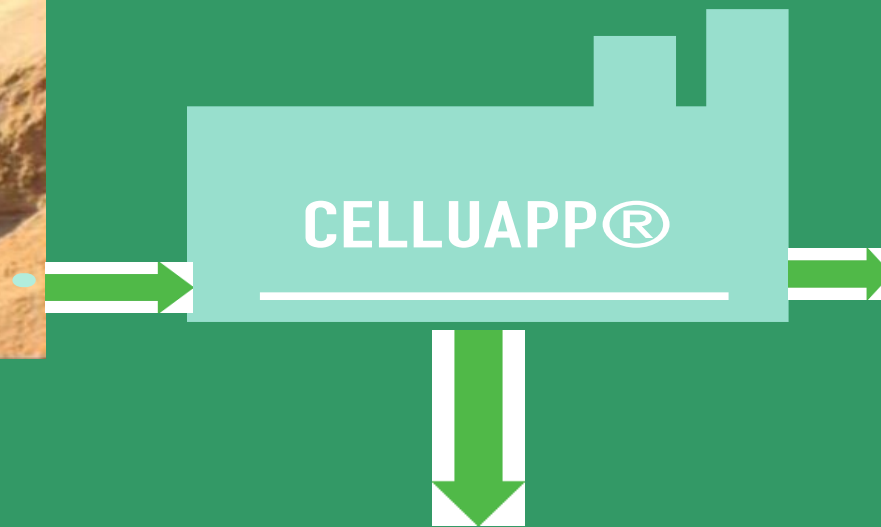


FRACTIONATION OF BIOMASS

To sugars, lignin and biogas
platforms CelluApp®

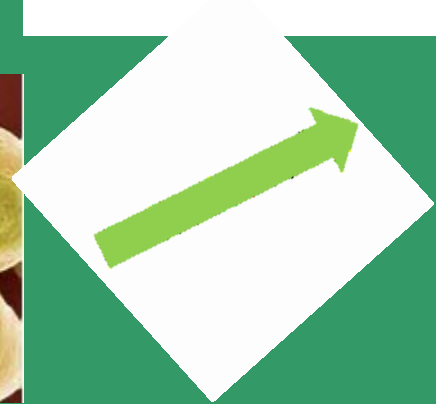
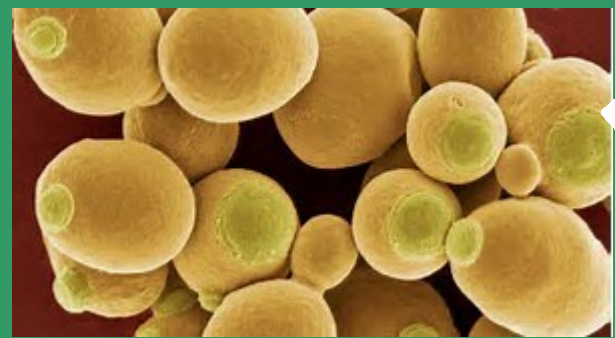
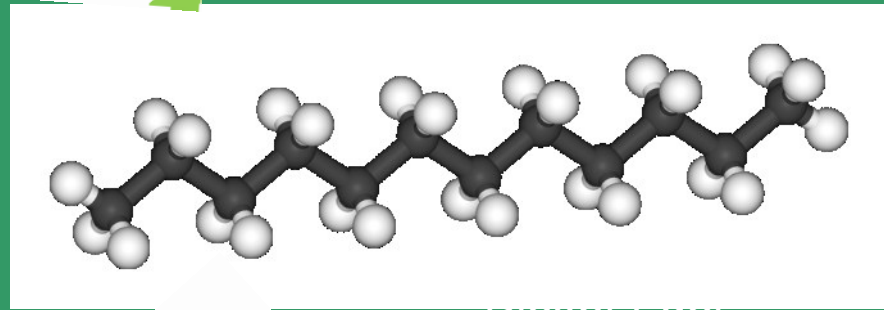
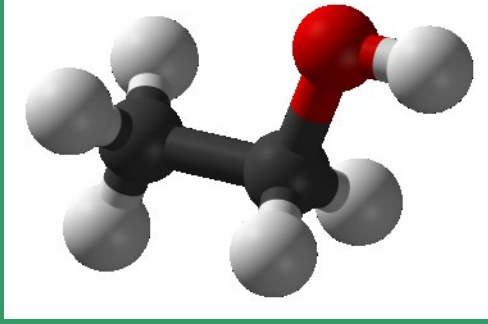
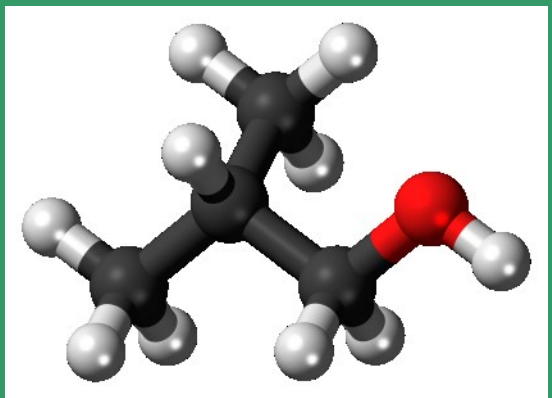
Sustainable bioethanol
Diesel substitute ED95

Biochemical methods

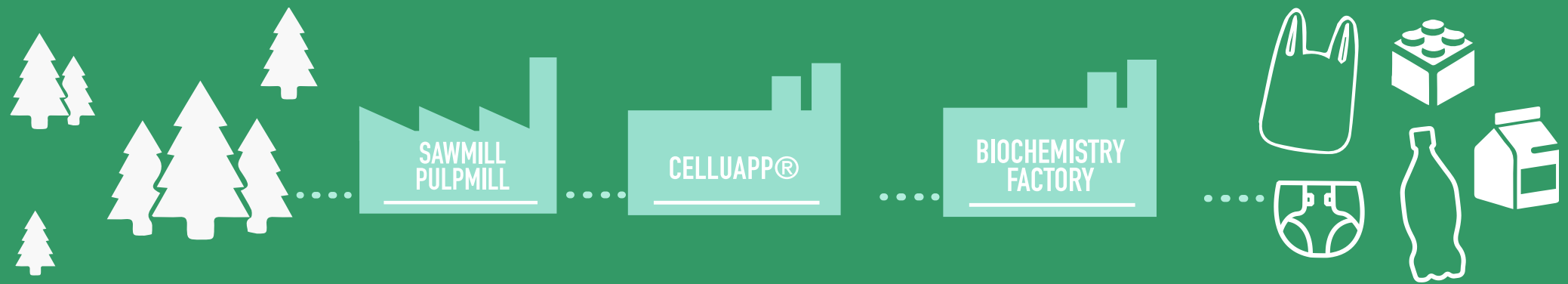


Lignin
Biogas
BioCO ₂

BIOJET

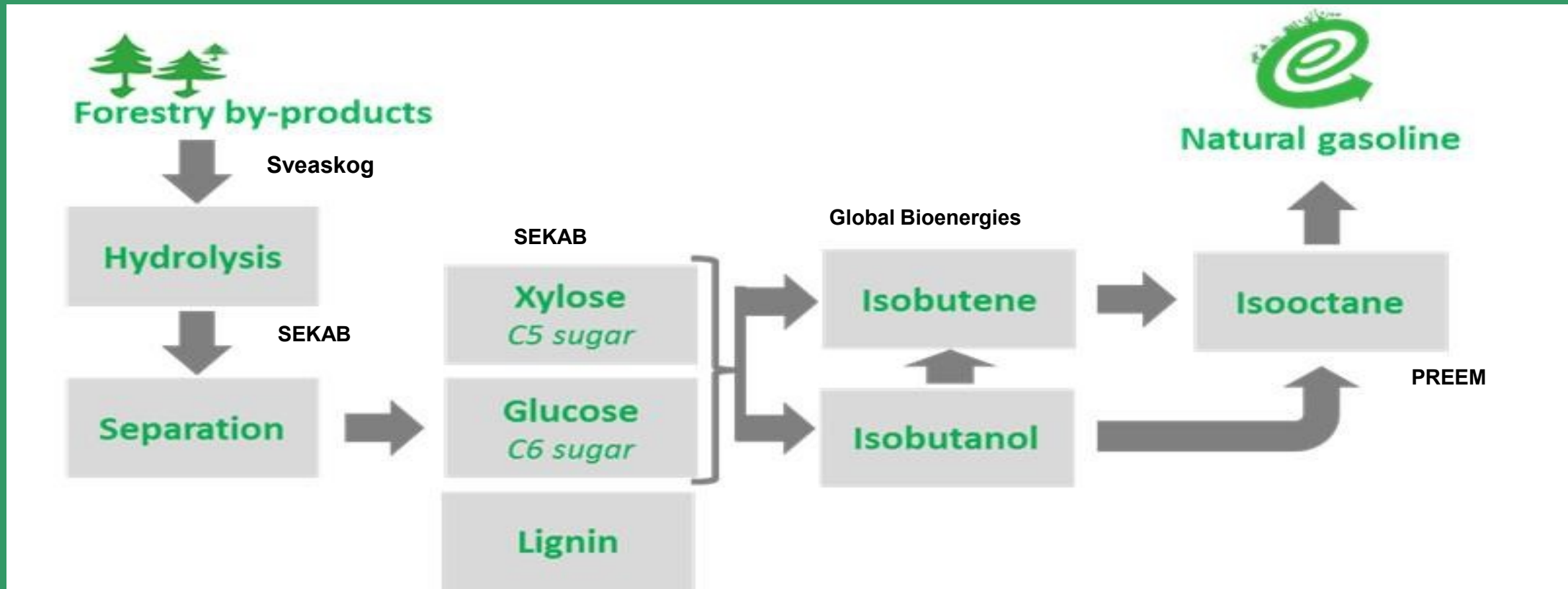


LOCALLY GROWN PLASTICS- VALUE CHAIN DRIVEN BY CONSUMERS

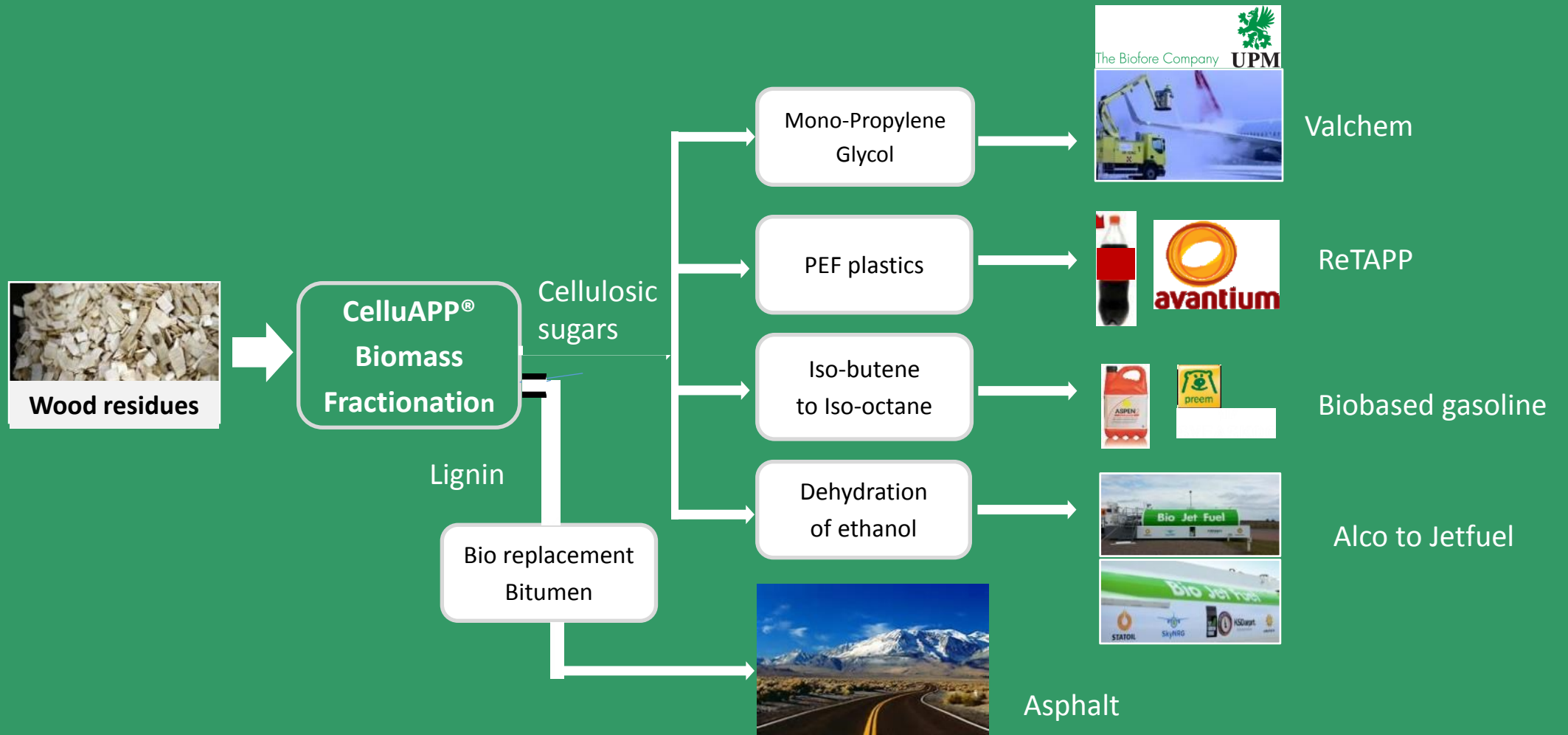


A collection of logos for partner companies. On the left, there is a logo for SVEASKOG (a crown over a W) and SÖDRA (a tree in a circle). In the center, there is the SEKAB logo and the processum logo (a crown over SP). On the right, there is the Tetra Pak logo (a triangle with a C), NorgesGruppen (a stylized wave), TRIOPLAST (a T with three dots), and ICA (a circular logo with a deer).

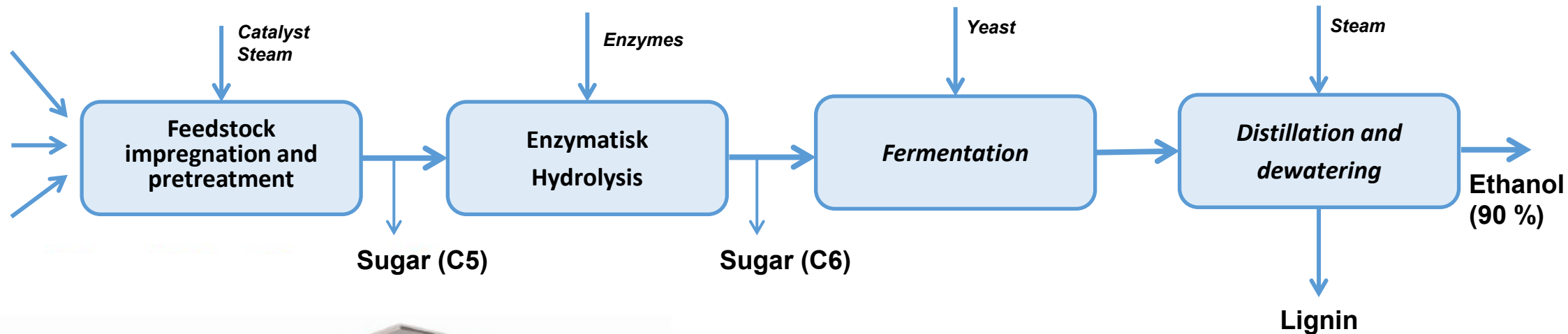
BIO-BASED GASOLINE



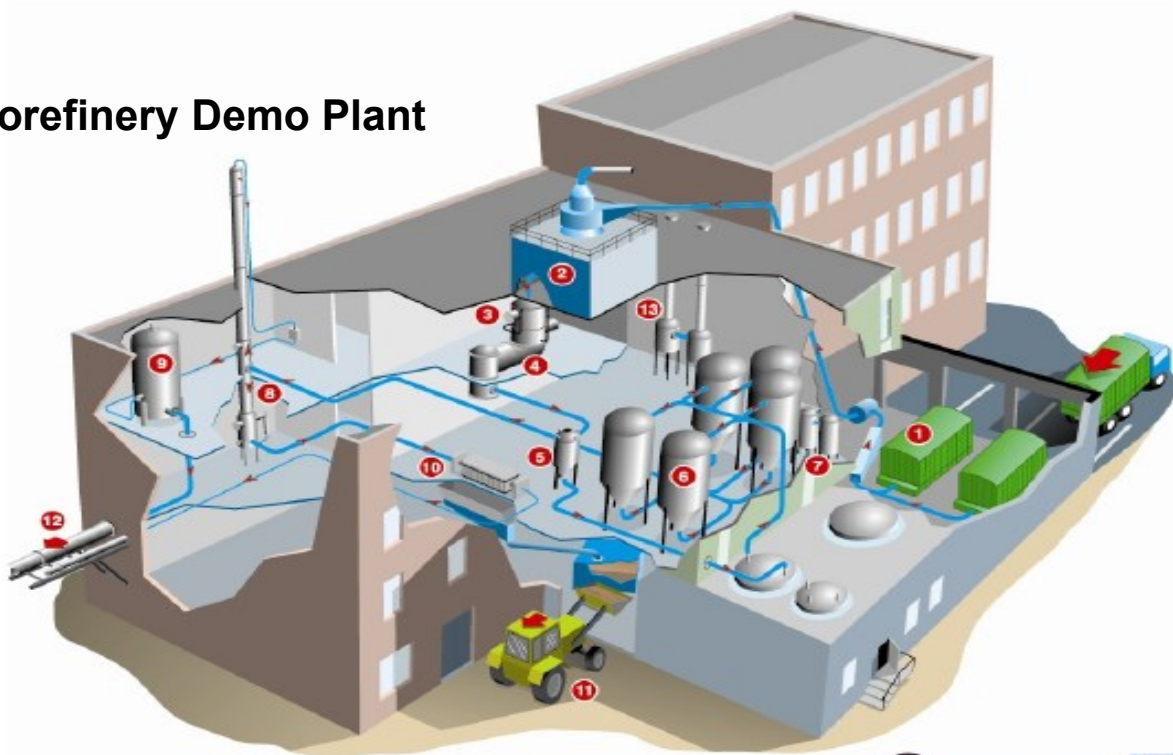
FROM BIOMASS TO BIOFUELS & CHEMICALS SEKAB VALUE CHAIN PROJECTS



CelluAPP® - Technology for fractionation of biomass



Biorefinery Demo Plant



1. Raw material intake
2. Feeding vessel
3. Steaming and impregnation
4. Pretreatment
5. Neutralisation and inhibitor control
6. Enzymatic hydrolysis and fermentation
7. Yeast propagation
8. Distillation
9. Product tank
10. Filter press
11. Solid material to incineration
12. Liquid to incineration/ biogas production
13. Evaporation Equipment

Enabler for bioeconomy

REDII-provides scale of economy

- REDII proposal **advanced biofuels** are ambitious and feasible!
- Long-term stability is needed
 - Keep Annex IX part A unchanged
 - Include new feed stocks in 2025 okay, but not delete.
 - Include a provision that requires Member States to determine penalties



Advanced Biofuels- technologies are ready



- Technology readiness levels between 7 and 9.
- 7 large cellulosic ethanol plants constructed.
- Wood-based renewable diesel production on-stream
- New technologies developing at fast speed

THANK YOU



ylwa.alwarsdotter@sekab.com