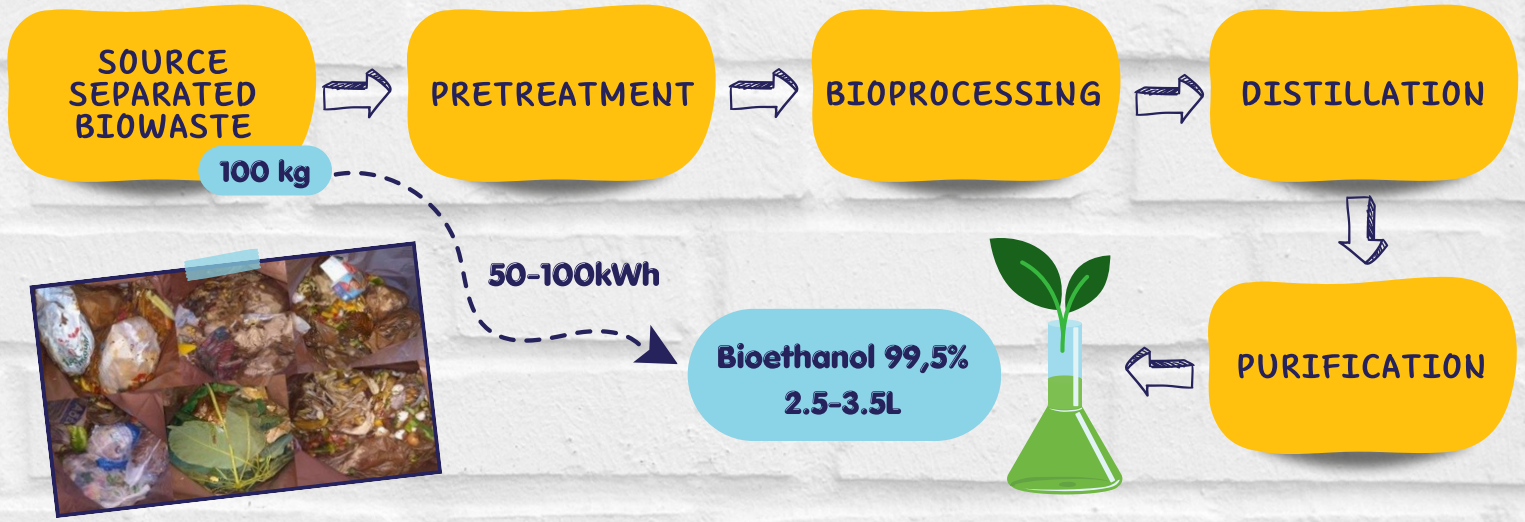
WaysTUP!

VALUE CHAINS FOR DISRUPTIVE TRANSFORMATION OF URBAN BIOWASTE INTO BIOBASED PRODUCTS IN THE CITY CONTEXT

BIOETHANOL FROM HOUSEHOLD WASTE

TURNING WASTE INTO GREEN CHEMICALS: ENVIRONMENT, CLIMATE CHANGES, SOCIETY



117 kg biowaste per capita per year in EU = over 1.5 million tons of bioethanol

THE PRODUCT

The characteristics of produced ethanol meet the quality standards for industrial ethanol, denatured ethanol, pure ethanol as well as absolute ethanol and thus the product can be used in such applications as a biosolvent. Bioethanol is also a high purity biofuel according to the specifications set out in EN standards.

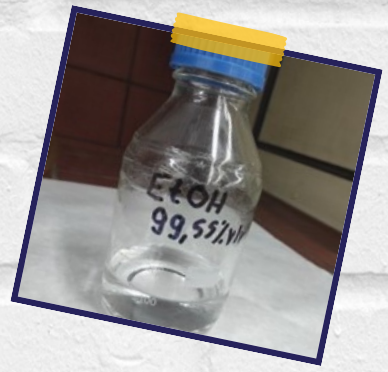
THE PROJECT

The EU funded WaysTUP! project aims to demonstrate the establishment of new value chains for urban biowaste utilisation to produce higher value purpose products through a multi-stakeholder approach in line with the circular economy.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement no. 818308.

THE PLANS

- Invest in demo plant for bioethanol production.
- Integration into regional source-separated biowaste treatment plants.



National Technical University of Athens

UEST (Unit of Environmental Science & Technology) is an educational and research unit at the School of Chemical Engineering of the National Technical University of Athens. Its main activities include: Teaching, Research Activity, Project implementation, and Service provision to public and private sector. The main target areas are: Solid Waste Management, Wastewater Treatment, Pollution & Environment Control, Environmental Impact Assessment, Life Cycle Analysis and Recycling.

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THE PILOT

The treatment train includes a food waste dryer or a shredder for the pretreatment step, a bioreactor (for enzymatic hydrolysis and fermentation) and a distillation unit (for the solvents recovery).

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The technology was developed in the frames of WaysTUP! pilots' activities.