

NextGenRoadFuels is a **Horizon 2020 project** to develop a competitive European technology platform for **sustainable liquid fuel** production.

The project will prove the Hydrothermal Liquefaction pathway (HTL) as an efficient route to produce high-volume, cost-competitive, drop-in synthetic gasoline and diesel fuels, as well as other hydrocarbon compounds.



**SUSTAINABLE DROP-IN  
TRANSPORT FUELS  
FROM HYDROTHERMAL  
LIQUEFACTION OF LOW  
VALUE URBAN FEEDSTOCKS**

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# CIRCULAR ECONOMY APPROACH

The project will develop a cost-effective valorisation pathway for multiple urban waste streams such as sewage sludge, organic waste and construction wood waste. These streams will be converted into renewable fuels, fertilizers and proteins, thus fostering the urban transition towards a circular economy.



# COST-EFFECTIVE AND SCALABLE TECHNOLOGY

At the basis of the NextGenRoadFuels process there are different combinations of thermo-catalytic, electro-catalytic and biochemical technologies.

This will permit to have a full scalable process, easy to integrate into existing supply infrastructures, and competitive final costs placing NextGenRoadFuels at the forefront in producing sustainable transport biofuels.

# FLEXIBLE MODEL

The consortium will use available state-of-the-art pilot facilities in 2 main scenarios:

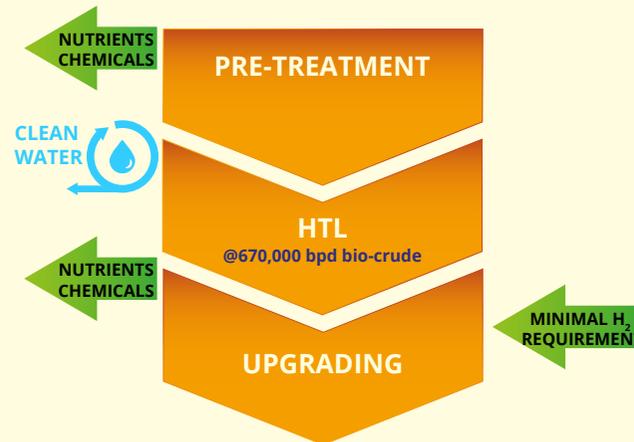
- a standalone model where a full production pathway from urban feedstock to drop-in fuels can be managed at a central facility;
- a hub-and-spoke model, with several HTL plants close to the sources of feedstock and serving a single upgrading facility

# THE PROCESS



## URBAN FEEDSTOCK

@107M dry ton per year in EU 27



## TRANSPORT FUEL MARKET



### DIESEL GASOLINE

@470,000 bpd in EU27

### OTHER OUTLETS FOR HEAVY FRACTION

@200,000bpd

# ACTIVITIES

1 Developing new strategies for collecting and pre-treating urban residues, building on existing logistics infrastructure while providing a higher added value through HTL processing.

2 Setting up an integrated approach along the entire value chain, both at lab-scale and pilot-scale, to allow in-depth understanding and optimization of process parameters in a holistic approach.

3 Studying different combinations of pre-treatment, HTL processing and upgrading, as well as their integration.

4 Carrying out process simulations and associated techno-economic assessments to define future industrial-scale implementation for an increased biofuels production capacity.

5 Evaluating the environmental and sustainability impacts of the process proposed in the project.

6 Defining efficient business strategies for the successful implementation and replication of developed value chains at European and global level.

7 Applying a full risk management strategy by considering all aspects (technology, economic, business, etc.) to achieve project objectives and ensure future implementation.

8 Promoting knowledge-sharing on HTL pathway and for producing renewable fuels amongst all relevant stakeholders, media and citizens.