



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 818413

Sustainable Drop-In Transport Fuels from Hydrothermal Liquefaction of Low Value Urban Feedstocks

November 2018

2019

2020

2021

2022



Lasse Rosendahl
Project manager

19 November 2019

Workshop Potential of Hydrothermal Liquefaction (HTL) routes for biofuel production, Brussels (B)



THE PROJECT and CONSORTIUM ...

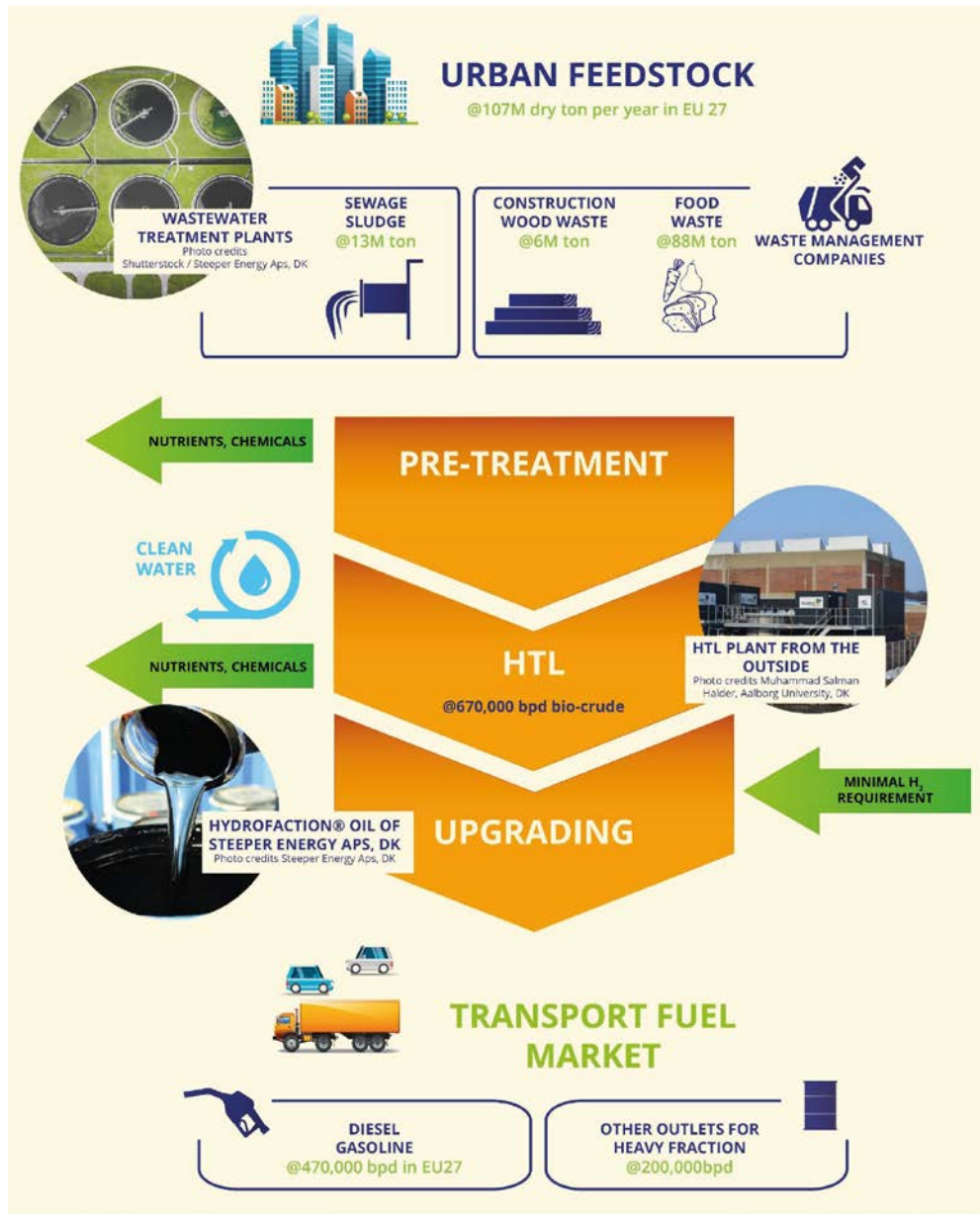
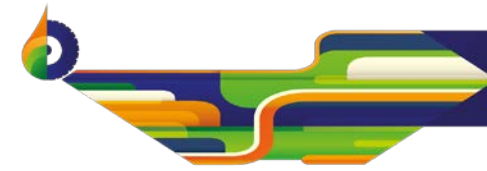
NextGenRoadFuels is a **Horizon 2020** project to develop a competitive European technology platform for **sustainable liquid fuel** production.

Responding to a call for **road transport fuels**, NextGenRoadFuels will prove the **HTL pathway** as an efficient route to produce high-volume, cost-competitive, drop-in synthetic gasoline and diesel fuels, as well as other hydrocarbon compounds.

It supports the **SET-Plan Key Action 8 on renewable fuels and bioenergy**, contributing to the renewable-energy-in-transport target and to the GHG emissions reduction objectives, in line with the **Renewable Energy Directive (RED II)** and the **European Energy Roadmap 2050**.

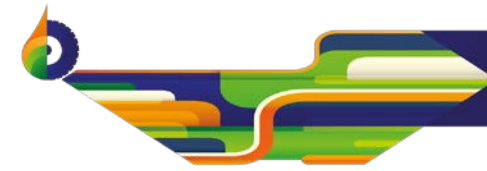


NextGenRoadFuels concept & overall focus

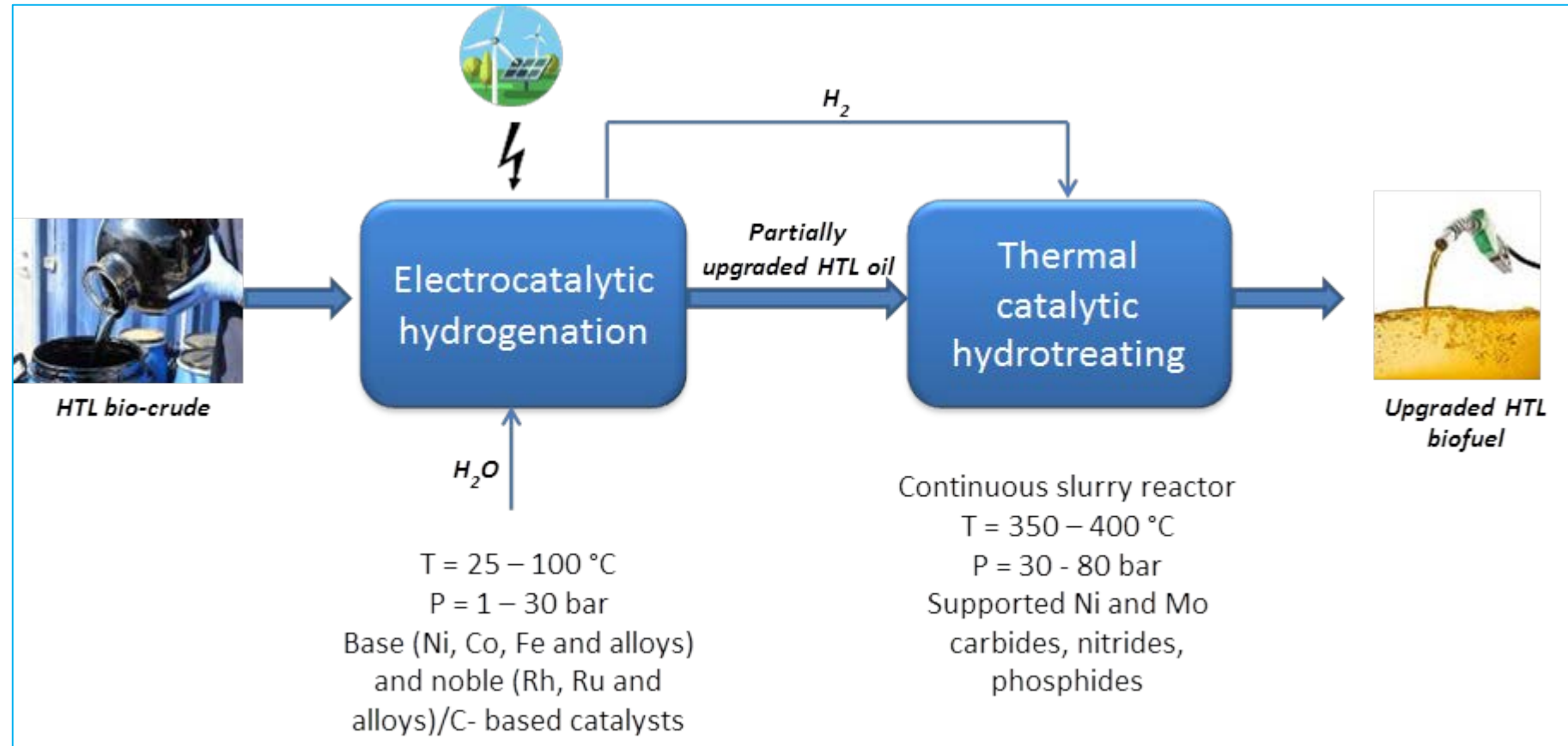


- 1 New strategies for collecting and pre-treating urban residues, building on existing logistics infrastructure while providing a higher added value through HTL processing
- 2 An **integrated approach along the entire value chain** (at lab- and pilot-scale), to allow in-depth understanding and optimization of process parameters in a holistic approach
- 3 Different combinations of **pre-treatment, HTL processing, upgrading and integration**
- 4 Process simulations and associated **techno-economic assessments** to define future industrial-scale implementation for an increased biofuels production capacity
- 5 **Environmental and sustainability impacts** of the process
- 6 **Efficient business strategies** for the successful implementation and replication of developed value chains at European/global level
- 7 **Full risk management strategy** by considering all aspects (technology, economic, business, etc.) to ensure future implementation
- 8 Promotion of **knowledge-sharing** on HTL pathway and renewable fuels production amongst stakeholders, media and citizens.

NextGenRoadFuels achievements to date ...



- 24 month deliverable: 100 kg *upgradable* biocrude from urban waste
 - Within first 12 months, more than 1.5 tonnes of sewage sludge have been processed →
 - ~100 kg biocrude
 - Material for separation/demineralization studies → *upgradable* biocrude



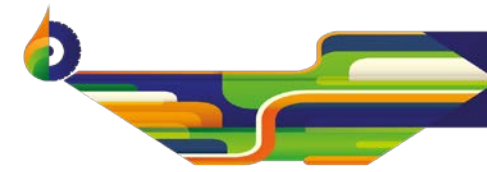


NextGenRoadFuels achievements to date ...

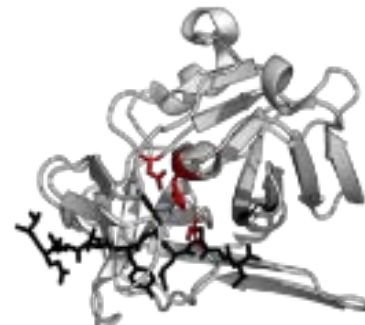
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- Organic MSW analyzed and screened for continuous processing



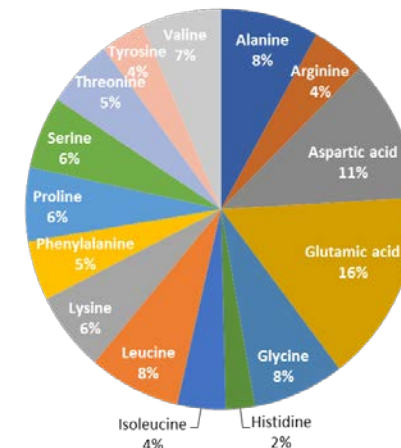
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- Organic MSW analyzed and screened for continuous processing
- Protein extraction pathways from urban waste analyzed and evaluated



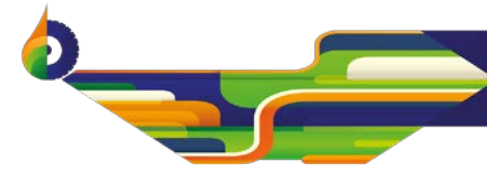
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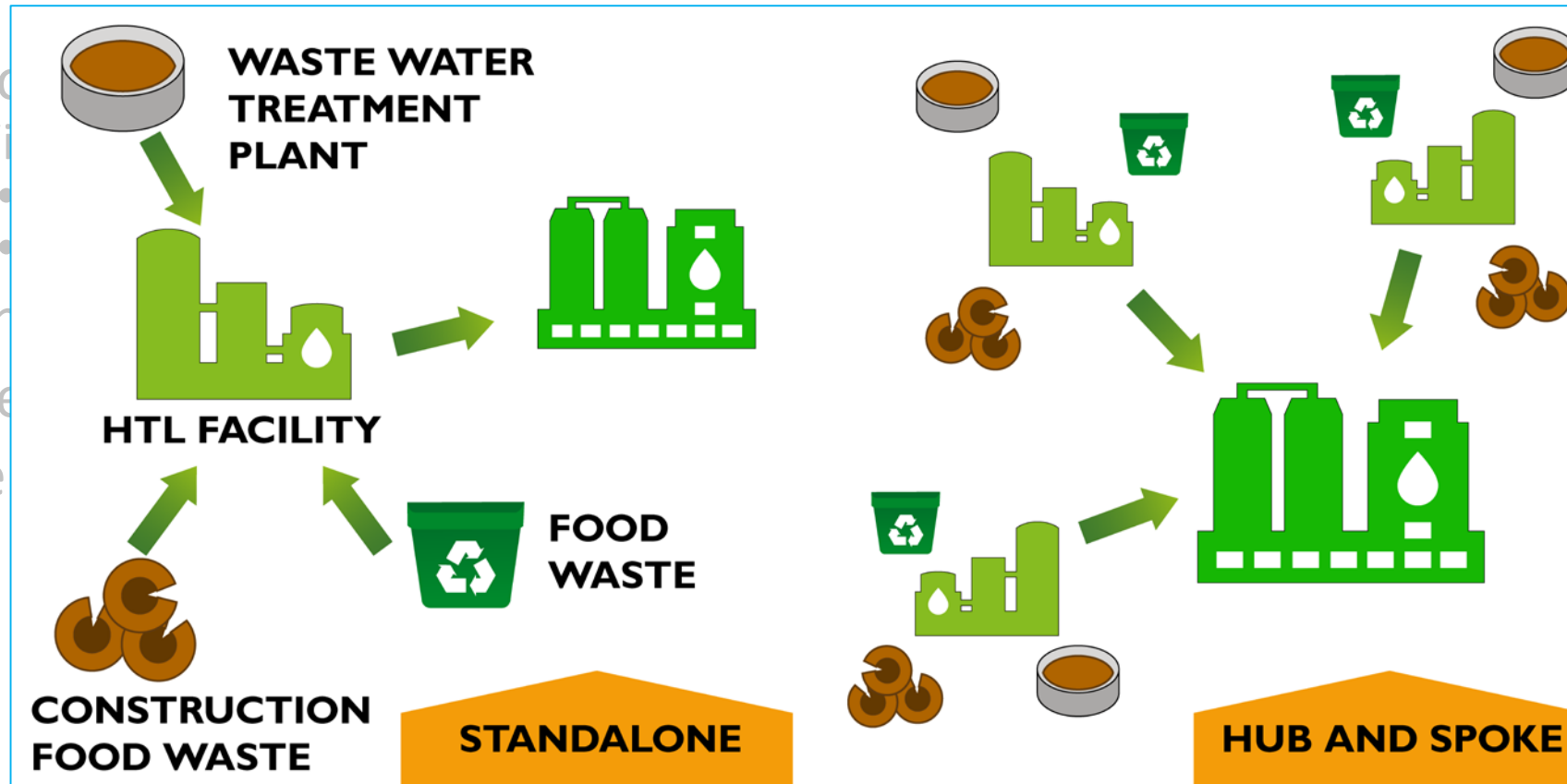
Yields:
~ 65-70%
Solubilized
Amino acid



NextGenRoadFuels achievements to date ...



- 24 months
- With
- Organ
- proce
- Prote



Process flow sheets established for techno-economics and LCA

We are on track to make Europe no 1 on renewables ...





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Thank you for your attention!

See also the NextGenRoadFuels poster ...



Project Partners



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