



ADVANCEFUEL

*Market barriers,
feedstock availability
& suitability for
advanced biofuels*

Welcome to ADVANCEFUEL's first Workshop

Kristin Sternberg
FNR
ADVANCEFUEL Stakeholder Workshop
Gothenburg, 20 September 2018

Agenda



Time	Topic	Presenter/ Contributing partners
12:30–13:15	Registration, Light Lunch	
13:15–13:25	Welcome, meeting agenda	Kristin Sternberg , (FNR)
13:25–13:45	Roundtable presentation of participants	
13:45–14:25	The main bottle-necks to the market roll-out of RESFuels ; the stakeholders' views+ 15 min discussion	Ayla Uslu , (ECN part of TNO)
14:25–15:05	Suitability of lignocellulosic feedstock and intermediates for advanced biofuel conversion + 15 min discussion	Stavros Papadokonstantakis (Chalmers)
15:05–15:25	Coffee Break	
15:25–16:05	State of the art of EU lignocellulosic feedstock availability and potential for advanced biofuels and connected challenges + 15 min discussion	Ric Hoefnagels (University Utrecht) Calliope Panoutsou (Imperial College London) Sonja Germer (ATB)
16:05–16:15	Conclusion	Kristin Sternberg , (FNR)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N.° 764799.



Introduction

ADVANCEFUEL – Facilitating market roll-out of RESfuels in the transport sector to 2030 and beyond

Aims to increase the share of renewable energy in the future energy mix by increasing the share of sustainable advanced biofuels and renewable alternative fuels in the final EU transport energy consumption.

Investigations will include the entire value chain, including

- (lignocellulosic-based) Biomass availability & suitability;
- Biofuels conversion processes and technologies;
- Advanced biofuels sustainability;
- End-use and social acceptance.





Introduction

ADVANCEFUEL – Facilitating market roll-out of RESfuels in the transport sector to 2030 and beyond

Guiding ideas:

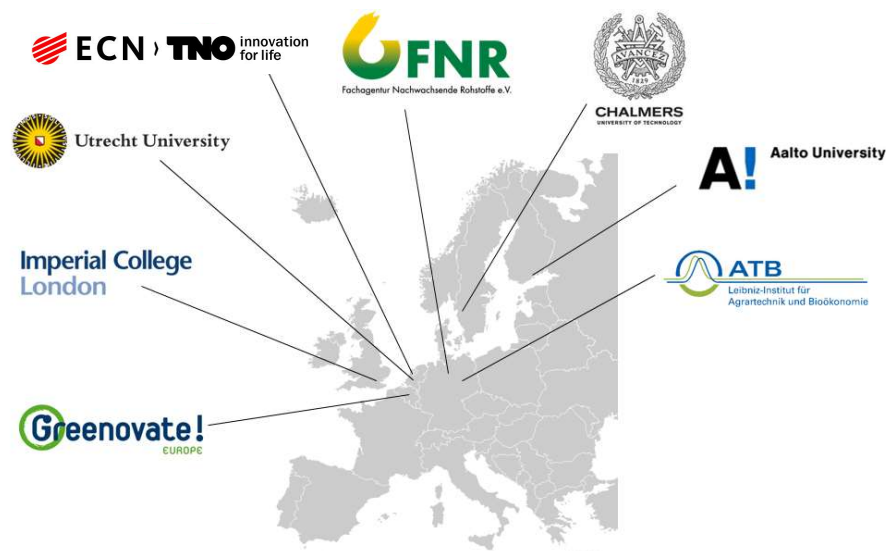
- Engagement of key players during the development of supporting guidelines & tools,
- Support to decision makers by providing tools and recommendations based on validated R&I results,
- Modeling and assessment of useful scenarios and sensitivity analyses on the future of RESfuels,
- Communication displaying positive message on sustainability of RESfuels aiming to increase demand





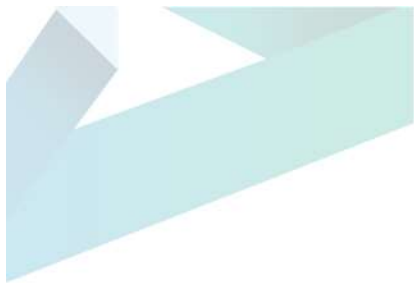
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PROJECT INFORMATION



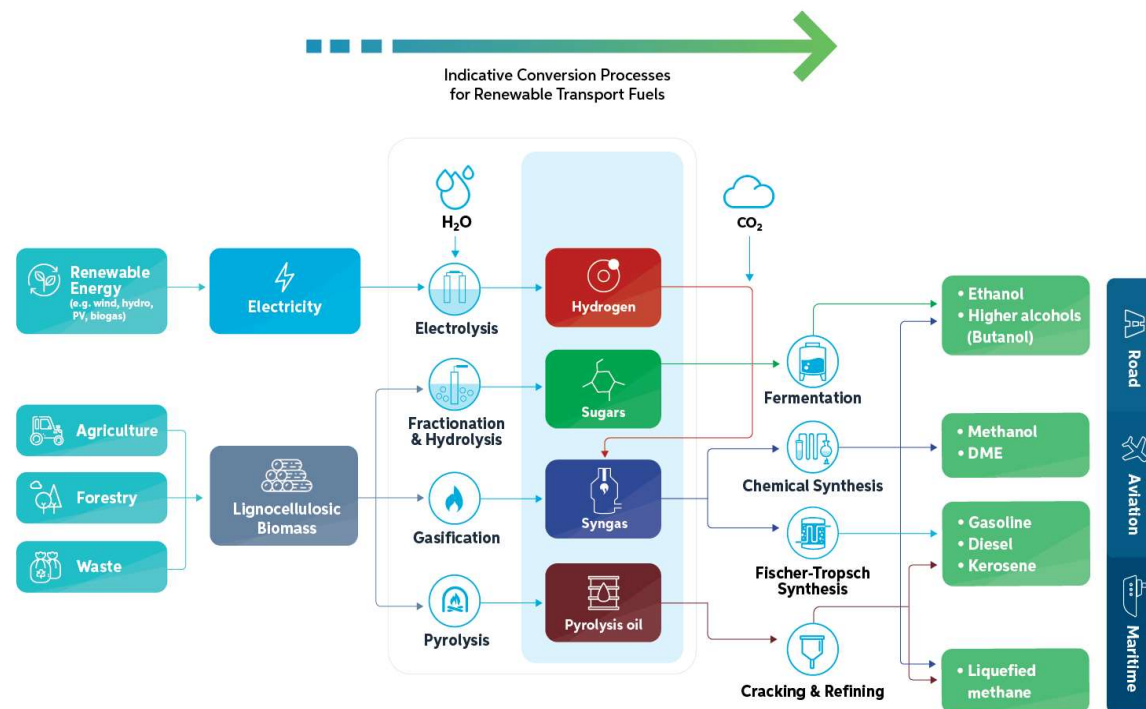
- 8 partners from 7 different countries
- Duration: 3 years (September 2017-August 2020)
- Coordinated by FNR, German Agency for Renewable Resources with the support of the Energy research Centre of the Netherlands (ECN part of TNO)
- Funded by the European Commission under the Horizon 2020 programme





ADVANCEFUEL Project Scope

ADVANCEFUEL
focuses on **liquid
advanced biofuels
and other liquid
renewable fuels**,
jointly referred to as
‘RESfuels’



Renewable resources
ADVANCEFUEL will focus on fuels produced from renewable resources, such as residues from agriculture and forestry, sustainable woody and grassy crops, waste and renewable energy, carbon dioxide and hydrogen.

Conversion processes
ADVANCEFUEL will look at different conversion processes that are already at a high development stage and have been validated in an industrial environment.

Renewable liquid fuels
Ultimately, ADVANCEFUEL aims to support uptake of both advanced biofuels and fuels produced from renewable hydrogen and CO₂ in the road, aviation and maritime transport sectors.





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Outputs of the project will include:

- Information about **advanced biofuels' Key Performance Indicators** to follow the progress in biofuels' market uptake;
- Information about **upgrading strategies for lignocellulosic feedstock supply chains**;
- Information on **innovations for high efficient and low risk biomass conversion technologies**
- Explanation of **RESfuel/ fuel blend property effects on end use** fuel performance
- Definition of options to **tailor and harmonise sustainability certifications** that fit RESfuels requirements

=> Will result in: concrete and action-oriented **Toolset for stakeholders**

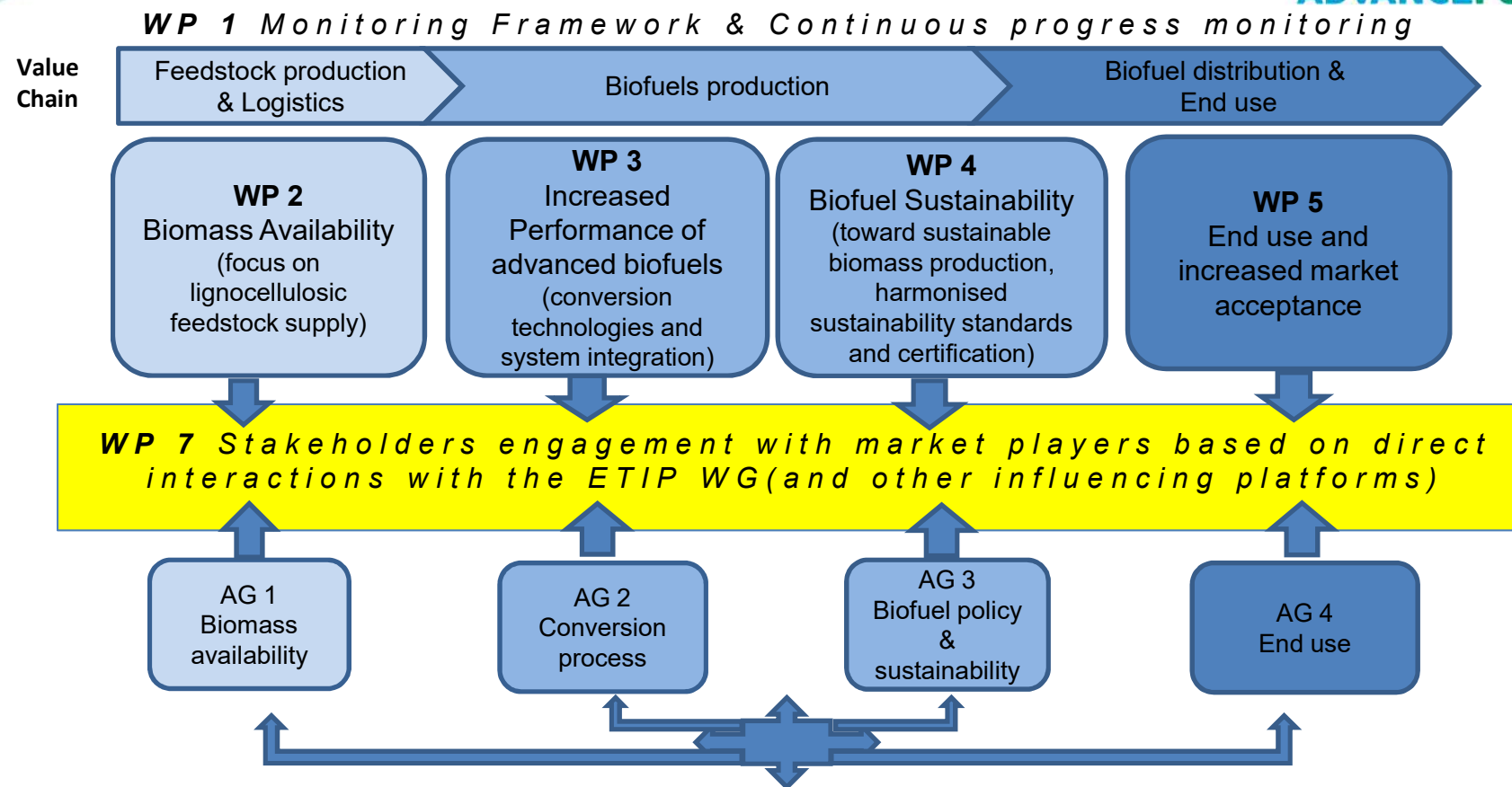


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MANAGEMENT STRUCTURE



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WP 8 – Dissemination and exploitation of project recommendations

WP 9 & 10 – Management and coordination; Ethics requirements



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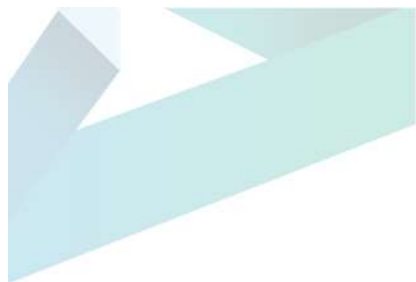
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STAKEHOLDER ENGAGEMENT

To build and validate their results, ADVANCEFUEL partners will engage all stakeholders from the biofuels value-chain and support actors to participate in the project through:

- Stakeholder **consultations**
(*barriers & sustainability schemes*)
- Dedicated **workshops**;
- The ADVANCEFUEL **Stakeholder Platform**,
to disseminate information and engage
dialogue with targeted stakeholders





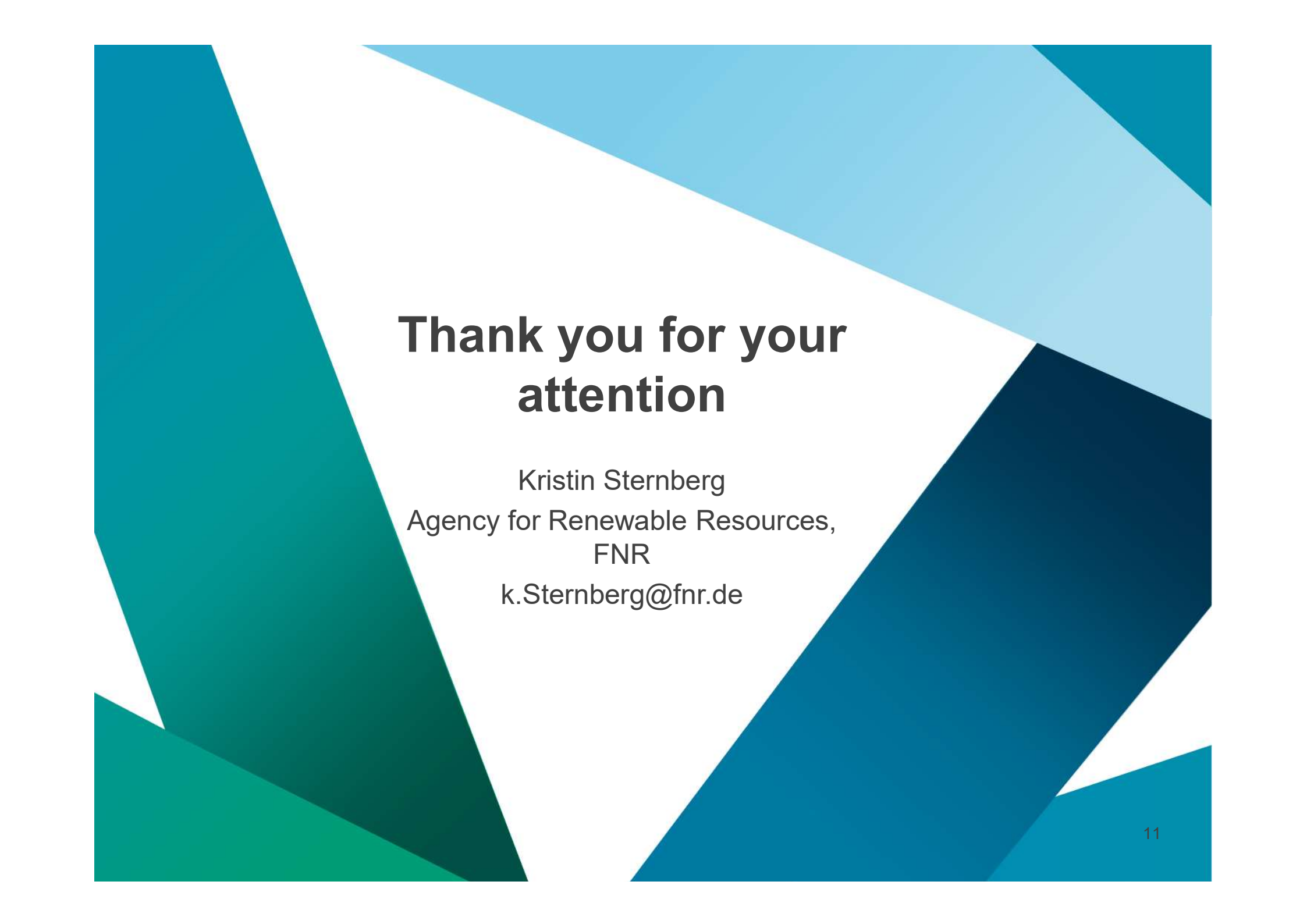
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Workshops



Topic of workshop	Date
Barriers to the market roll-out of RESfuels & Availability of lignocellulosic biomass and its suitability for being converted into advanced biofuels	Today
ADVANCEFUEL - SEEMLA Workshop: Innovative lignocellulosic cropping systems and supply chains	20/ 21 Nov. 2018; Square Convention Centre, Brussels
Conversion and technology up-scaling	Beginning of 2019
Sustainability, certification, standards	Sept./ Oct. 2019
End use and policy recommendations	Feb./ March 2020





Thank you for your attention

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BIOMASS AVAILABILITY

Second generation biofuels will rely on provision of new biomass resources, for which value chains do not currently exist. To address this challenges, ADVANCEFUEL will:

- Develop a tool for **advanced biofuels full value-chain analysis**, calculating the costs of all bio-based value chains and optimal fuel mixes;
- **Assess the availability and suitability** of lignocellulosic feedstocks for advanced biofuels production;
- Develop **innovative crop rotation schemes** for more sustainable feedstock production;
- Develop strategies for the **construction of new feedstock supply chains**.





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BIOFUELS CONVERSION

New technologies will be needed for conversion of biomass into renewable fuels. ADVANCEFUEL objectives in this area are:

- To **map** existing process technologies and infrastructures;
- To **range** technologies according to costs, complexity, biomass use and infrastructures;
- To **identify needs** for technology development and innovation;
- To draft a **timeline** for the widespread implementation of new and existing biomass process technologies.





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SUSTAINABILITY

Sustainability of biofuels requires socio-economic and environmental impacts across the entire value chain to be taken into account. In that sense, ADVANCEFUEL will:

- Review **European standards and certification schemes** for sustainable energy-purposed biomass production;
- Identify possibilities for **pan-European harmonisation** of standards;
- Develop **sustainability criteria and indicators** for biomass feedstocks and supply chains.





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END-USE AND ACCEPTANCE

Policy-makers, industries and consumers remain skeptical about the potential use of renewable fuel. ADVANCEFUEL will work with these stakeholders to:

- Develop a set of **numerical tools** for the prediction of fuel and fuel blend properties;
- Carry out a comprehensive **market analysis** for advanced biofuels;
- Collect **best practices** for biofuels' successful market uptake.
- Carry out a thorough **analysis** of European biofuel support **policies**.

