



Destination Green

ICAO Symposium on Aviation and Climate Change, "Destination Green", 14 – 16 May 2013

Initiative Towards sustainable Kerosene for Aviation Overcoming barriers for commercialization



ITAKA will link supply and demand by establishing a relationship under guaranteed conditions between feedstock grower, biofuel producer, distributor and airlines.



1. Background

ITAKA is a collaborative project framed in the implementation of EU policies

In 2011 the EC, and key industry stakeholders launched the **European Advanced Biofuels Flightpath** with the objective to achieve **2 million tons of sustainable biofuel per year in 2020**.



A key point to achieve this ambitious target is to promote and create in an efficient manner the **supply** chain, from offer (raw and refined materials) up to **demand** (airlines and standards)



FP7 2012 CALL



Topic ENERGY.2012.3.2.2: *Development and testing of advanced sustainable bio-based fuels for air transport*



2. General description

ITAKA is expected to **demonstrate the readiness of large-scale production in the EU of sustainable SPK (Synthetic Paraffinic Kerosene)**, being the first of its kind collaborative project in the EU.

ITAKA will **link supply and demand** by connecting the **full value-chain**: feedstock grower, biofuel producer, distributor and airlines.





3. Objectives

1.- PRODUCTION:

Demonstrate the capability of the whole value chain.

Feedstock

Will focus on camelina plantations, to improve key aspects including economic (productivity), social/land use and environmental aspects.



Conversion technology

Using an **existing plant (Neste Oil's Porvoo Refinery)** the target is to enable the commercial scale production at the first-of-its-kind plant in the EU at a large enough scale to reduce production cost beyond the state of the art.





3. Objectives

2.- LOGISTICS and LARGE SCALE USE:

Perform large scale testing to obtain data in typical EU flights

Logistics

ITAKA will address all **downstream logistics** (i.e. blending, transport, storage and airport supply operations) **at large scale**, both through a dedicated and a non-dedicated system.



Engine and fuel systems testing

ITAKA will **allow evaluation of the impacts on aircraft operations** in typical flights in Europe.

Flight-testing will be carried out and relevant datasets shall be collected for the final assessment.



3. Objectives

3.- SUSTAINABILITY ASSESSMENT:

Identify technical, environmental and socio-economical barriers.

ITAKA will ensure that **at least 60% GHG savings** are reached by means of a lifecycle assessment.

The **socio-economic effects** of the biofuel production are widespread and difficult to assessed but will also be addressed, specially in the sphere of feedstock production.





3. Objectives

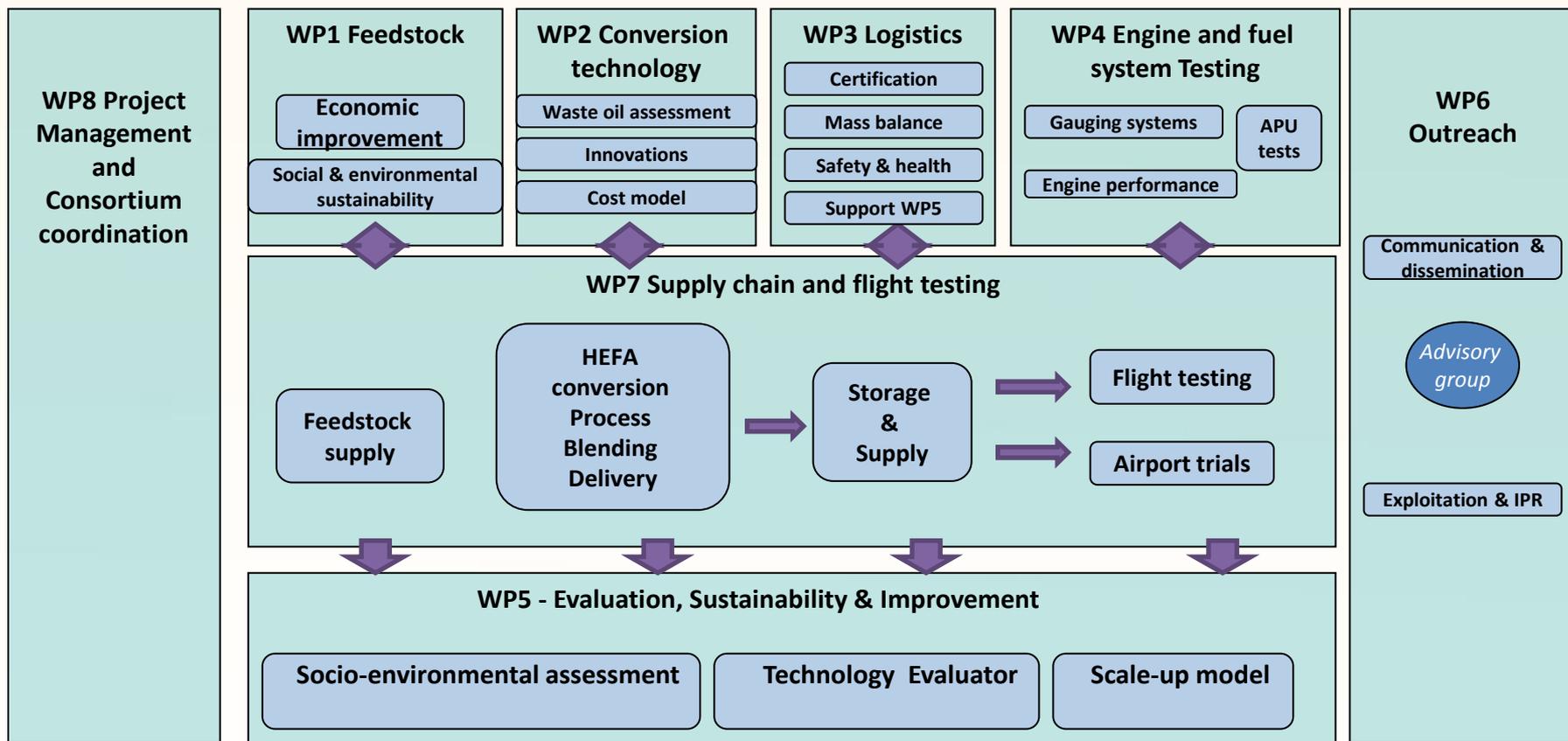
4.- OUTREACH:

ITAKA also aims to build-up a strong partnership to contribute to a worldwide effort for the development and deployment of sustainable bio jet fuels.

Project results will be disseminated and should support EU policy development in this field.



4. Structure





5. Consortium / Partners

	SENASA
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	Asociatia Central de Biotehnologii Microbiene BIOTEHGEN
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	EADS
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	EMBRAER
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	Neste Oil
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	Camelina Company España (CCE)
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	Airbus
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	Compañía Logística de Hidrocarburos S.A. (CLH)
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	École Polytechnique Fédérale de Lausanne (EPFL)
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	Manchester Metropolitan University (MMU)
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	SkyEnergy
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	Consorzio per la Ricerca e la Dimostrazione Sulle Energie Rinnovabili (RE-CORD)
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6. Project status



Feedstock	<ul style="list-style-type: none"> • Around 10,000 ha of camelina growing in Spain • Trials in Spain and Romania for improving yield and sustainability
Conversion technology	<ul style="list-style-type: none"> • Improving operability of the conversion process going • Methods for improving the usability of UCO as feedstock undergoing
Logistics	<ul style="list-style-type: none"> • Certification and operation barriers: solutions under study • Airport comingled supply test programming
Final use	<ul style="list-style-type: none"> • Engine/fuel systems programming • APU and flight testing design
Overview	<ul style="list-style-type: none"> • Pre-evaluation of the technology level (xRL) made • GHG emissions balance (preliminary results) • Scale-up model on progress



7. Links with other initiatives

National Initiatives

- ✓ Commercial Aviation Alternative Fuels Initiative ([CAAFI](#))
- ✓ Aliança Brasileira para Biocombustíveis de Aviação – [ABRABA](#)
- ✓ Initiative for Renewable Energy in Germany – [AIREG](#)
- ✓ Spanish Initiative for the Production and Consumption of Biokerosene for Aviation ([Bioqueroseno.es](#))





8. Website

www.itaka-project.eu



The screenshot shows the ITAKA website homepage. At the top is a banner with the ITAKA logo and the text "Initiative Towards A sustainable Kerosine for Aviation". Below the banner is a navigation menu with links: Home, About ITAKA, Partners, Publications, News, Events, Contact, and Intranet.

The main content area is divided into several sections:

- Welcome to ITAKA:** A text block explaining the consortium and the project's goal to produce sustainable biofuels. It includes an image of a plane flying over a road.
- Our Partners:** A section featuring the logo for "camelina company España".
- Camelina Plantations:** A section describing the project's activities, including an image of camelina plants. It mentions that the plantations are in arid dry-land regions.
- New Camelina Variety:** A section about Biotechgen's work on a new camelina variety with higher oil content, including an image of a person in a lab coat examining a plant.
- Last News:** A list of recent news items with dates:
 - 22 Jan: Europe needs stable legal framework for biofuels to prosper: Neste
 - 17 Jan: Trade Arabia: Aviation biofuel plant on track says BA
 - 14 Jan: Shares Investment: Algae.Tec and Lufthansa Sign Collaboration Agreement to Build Biofuel Production Facility in Europe
 - 11 Jan: Greenair Online: Qatar Airways first to benefit from commercial introduction of synthetic GTL jet fuel at Doha
- Site Map:** A link at the bottom of the page.

At the bottom right, there is a logo for the "SEVENTH FRAMEWORK PROGRAMME" with the text: "The research leading to these results has received funding from the European Union Seventh Framework Programme [FP7/2007-2013] under grant agreement n° 308807".