



Bioref-Integ: An FP7 Project on Biorefinery

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Introduction

- Challenge for many bioenergy routes: poor competitiveness compared with fossil energy
- An option for making them more cost competitive: co-production of high-value products from the same feedstocks, within biorefineries
- Biorefineries: largely at the conceptual stage, with potentially interesting novel products and routes being identified
- Biorefineries: different definitions, depending on type of activities and stakeholders involved



Definition of biorefinery according to IEA Bioenergy Task 42

A biorefinery is the sustainable processing of biomass into a spectrum of marketable products and energy



Biorefineries (1)

- Are a cluster of facilities, processes, industries
- Are sustainable: maximising economics, minimising environmental impacts, replacing fossil fuel, while taking socio-economic aspects into account
- Contain different processing steps: upstream processing, transformation, fractionation, thermo-chemical and/or biochemical conversion, extraction, separation, downstream processing



Biorefineries (2)

- Can use any biomass feedstock: crops, organic residues, agro-residues, forest residues, wood, aquatic biomass
- Produce more than one product, each with an existing (or shortly expected) market of acceptable volumes and prices
- Can provide both intermediate and final products, i.e. food, feed, chemicals, and materials
- Can co-produce energy as fuels, power, and/or heat.



BIOREF-INTEG

- A Coordination and Support Action project within the framework of the FP7 programme (Theme Energy)
- June 2008 – May 2010
- Main project goal: Development of advanced **BIOREF**inery schemes to be **INTEG**rated into existing industrial (fuel producing) complexes
- Evaluation of economical and ecological benefits of the integrated schemes in comparison to the reference cases



Biomass processing sectors

- Bioethanol
- Biodiesel
- Pulp & paper
- Conventional oil refinery
- Power production
- Food industry
- Agro-sector

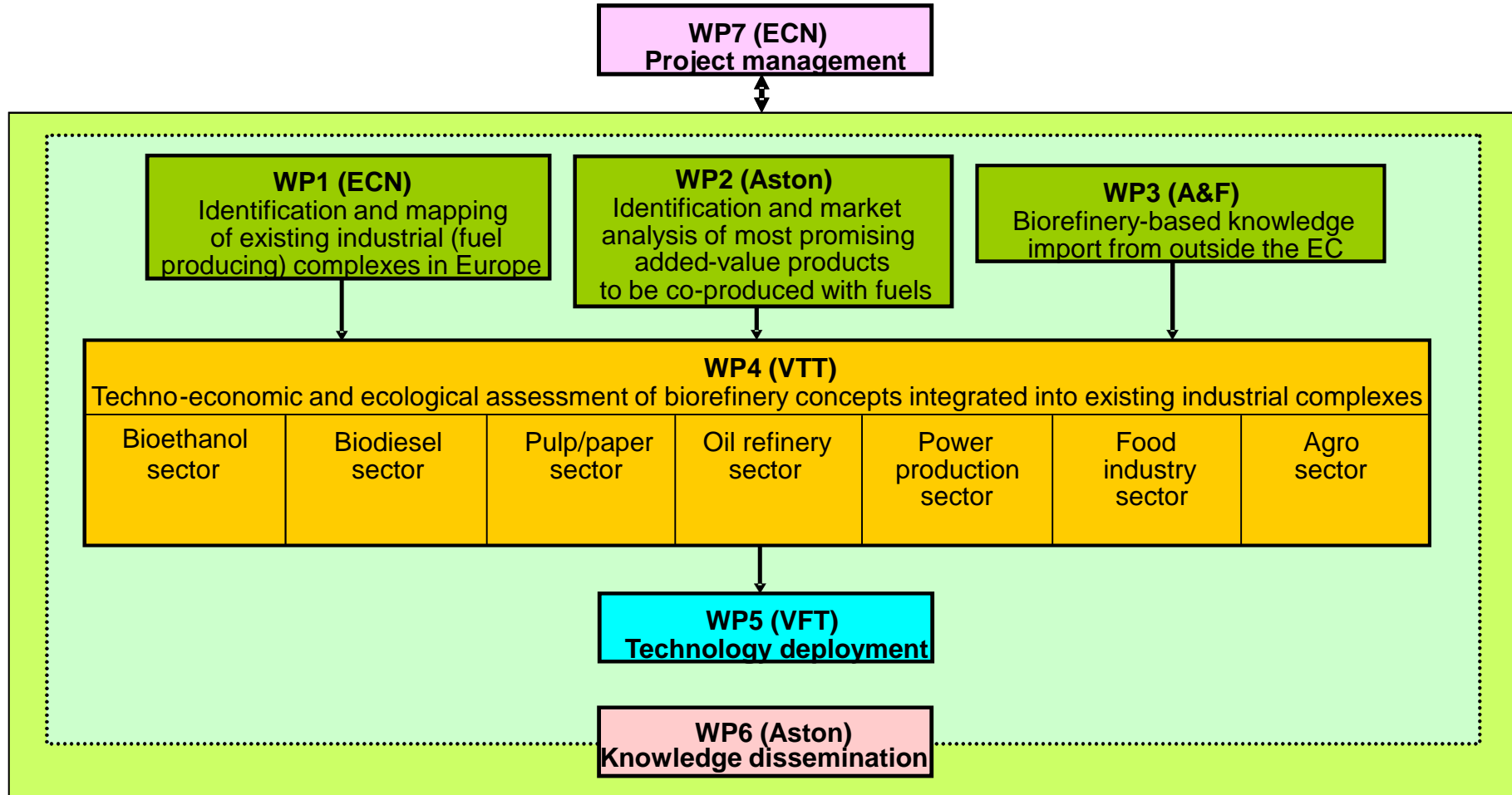


Partners

Industry	SME	University	RTD Institute
Abengoa Bioenergy New Technologies (ES) (Bioethanol)	ETC (SE) (Forest-based biorefinery / black liquor gasification)	Aston (UK)	VTT (FI)
Cehave (NL) (High quality animal feed)	Ten Kate (NL) (High quality animal fats & proteins)	UGent (BE)	WUR A&F (NL)
Repsol (ES) (Conventional oil refinery)	VFT (BE) (Industrial marketing services with focus on renewable resource materials / coaching the innovation process)		STFI (SE) (Pulp & paper industry)
	Bioro (BE) (Biodiesel)		ECN (NL)



Work Packages



**Thank you for your
attention!**

