



AIMPLAS

INSTITUTO TECNOLÓGICO
DEL PLÁSTICO

HIGH VALUE-ADDED CHEMICALS AND BIORESINS FROM ALGAE BIOREFINERIES

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***EUROPEAN ROADMAP for
an Algae-based industry.***

April 2016

Content

About AIMPLAS: BISIGODOS coordinator

BISIGODOS Project





AIMPLAS
PLASTICS TECHNOLOGY
CENTRE

About **AIMPLAS**: **BISIGODOS** coordinator

What is AIMPLAS?



AIMPLAS is a **Technology Centre** with more than 25 years of experience helping companies in the plastics sector



Global expertise across the whole **plastics value chain**:



Resources



**INJECTION & EXTRUSION
PILOT PLANT**

New facilities



**COMPOUNDING
PILOT PLANT**

**THERMOSET
PILOT PLANT**

LABORATORIES

TRAINING

ADMINISTRATION

**INFORMATION &
R&D MANAGEMENT**

R&D Lines



- 1 Development of polymeric materials**
- 2 Improving transformation processes**
- 3 Product development**



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BISIGODOS PROJECT

**High value-added chemicals
and bioresins from algae
biorefineries produced from
CO₂ provided by industrial
emissions**

www.bisigodos.eu

(FP7/2007-2013) under grant
agreement n° [613680]



- **Full title:** High added-value chemicals and bioresins from algae biorefineries produced from CO₂ provided by industrial emissions
- **Acronym:** BISIGODOS
- **Funding scheme:** Collaborative Project targeted to a special group
- **Call identifier:** FP7-KBBE-2013-7-single-stage
- **Number of partners:** 14
- **Funding:** € 5.642 M, budget: € 3.853 M
- **Ongoing- Duration:** 30 month – 42 months



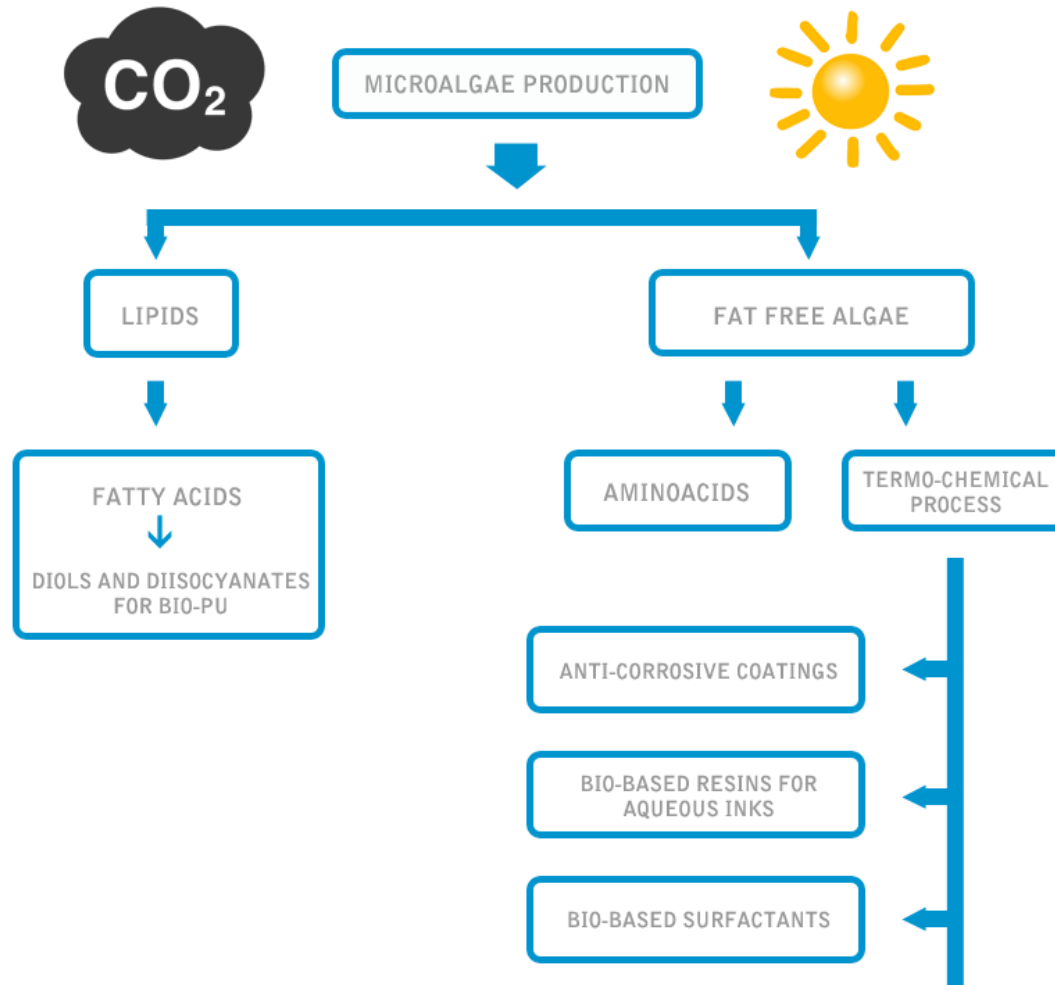
- **Growing demand for resources and competition for land use.**
- **Sustainability.**
- **Innovative, resource-efficient and integrated approaches.**
- **Environmentally friendly technologies.**
- **Competitiveness of European industry.**
- **Algae derived added value products.**



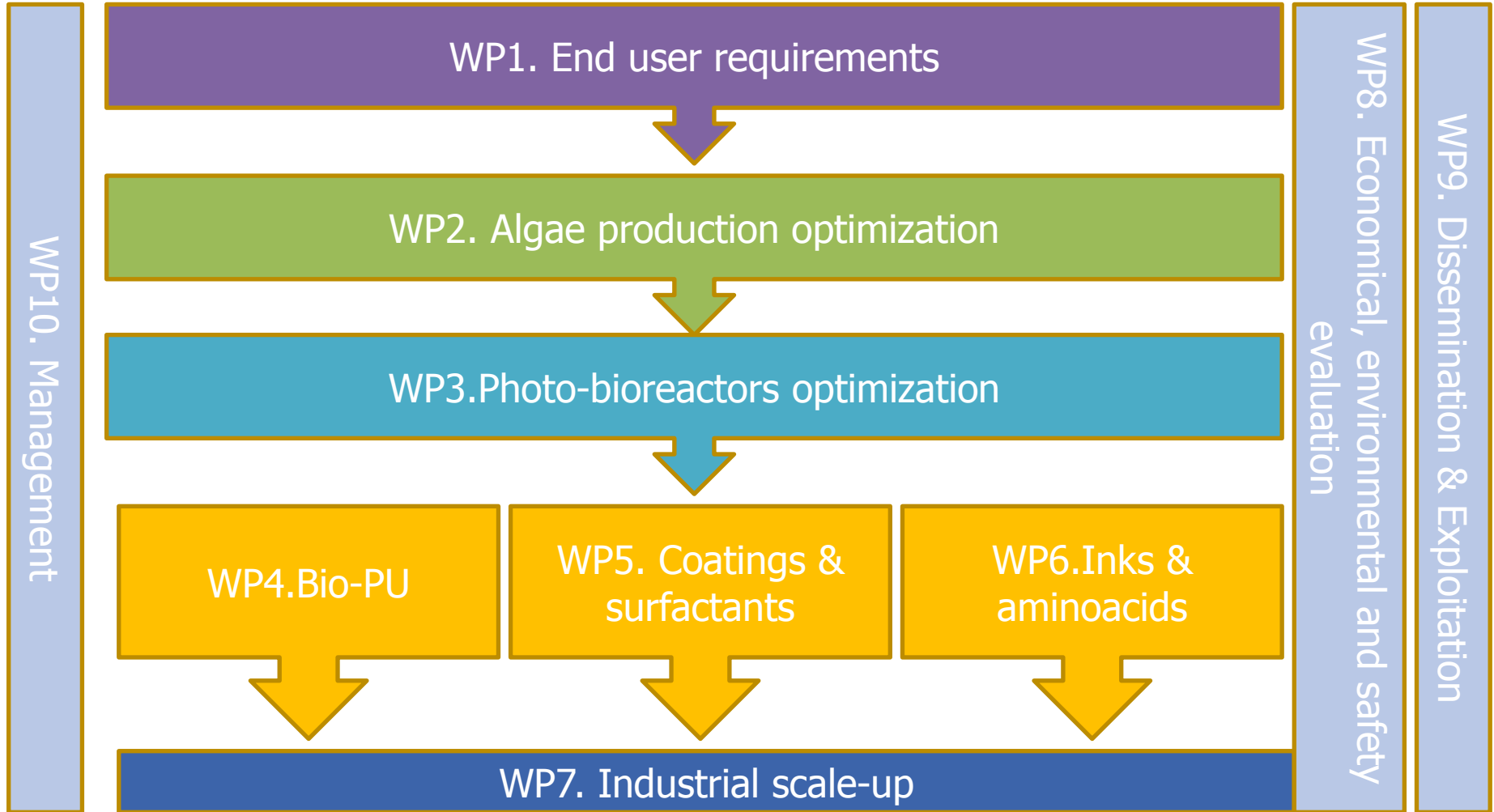
- **Optimization of production of new algae strains**
- **Energy balance improvement**
- **Photo-bioreactors optimization**
- **Study and adaptation of separation of algae components based on hybrid technologies**
- **Production of algae derived chemicals for hair care and packaging applications and amino acids for food applications**
- **Algae derived components production for anti-corrosive coatings and bio-based inks**
- **Reduction of industrial CO₂ emissions up to 65% by means of producing high added-value products**

BISIGODOS Scheme

BISIGODOS



Workplan



Consortium

BIOGODOS

- **14 partners** from **7 countries**.
- **4 SMEs:** PDC, PHYCOSOURCE, GBR.AT, CASPEO
- **2 RTDs:** VTT, AIMPLAS
- **6 Large companies:** 3V TECH, BECKERS, SUNCHEM, CUSA, CRODA, BFS
- **2 High Education:** BANGOR, WARWICK



Consortium

BISGODOS

BFS
bio fuel systems


PHYCOSOURCE
microalgae discovery


3V
TECH


VTT


Caspero
Serving your process needs
www.caspeo.net


PDC


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INSTITUTO TECNOLÓGICO
DEL PLÁSTICO


PRIFYSGOL
BANGOR
UNIVERSITY

THE UNIVERSITY OF
WARWICK


gruene-
bioraffinerie.at


CROMOGENIA-UNITS,S.A.

Beckers


SunChemical
a member of the DIC group 

CRODA

AIMPLAS

End users requirements

Property of algae-based components

Physical form

Acid Number

Functionality

Viscosity

Color

Moisture

Density

Odour

Heavy metals

Appearance



Algae Optimization

BISGODOS

Microalgae strains screening

Microalgae strains characterization

Microalgae strains final selection

Photobioreactor modelling

Simulation tool

Techo-economical evaluation

Scale up

Thank you for your attention

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