



**SPIRE
Pre-Brokerage
event**

21 September 2017

**DOWNSTREAM PROCESSES
TO IMPROVE EFFICIENCY
AND VALORISATION OF
BYPRODUCTS**

Eduardo Palomares
apalomar@iqn.upv.es



□ EU projects:

DEFNET

GREEN

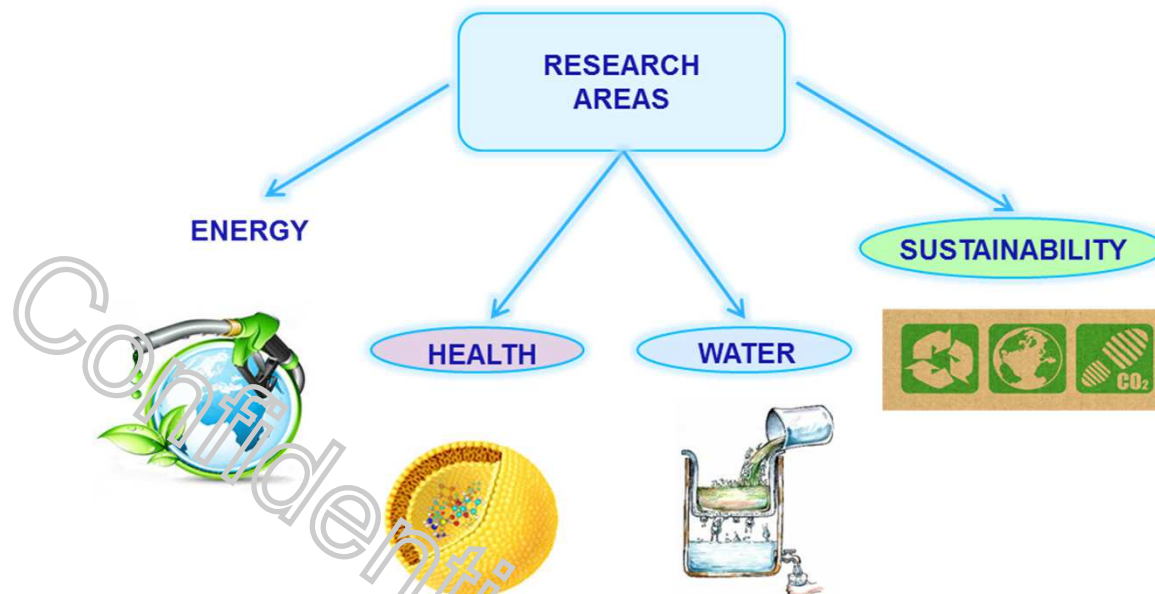
MULTI2HYCAT

life+greenzo

NOVACAM



NEWAPP



-Two main research lines:

- Structured materials for generation of clean fuel and renewable energy
- Chemical and photochemical processes in life science and sustainable chemicals production

Downstream processes to improve efficiency and valorisation of byproducts

CE-SPIRE-04-2019: Efficient integrated downstream processes

Key action: Feed / Process

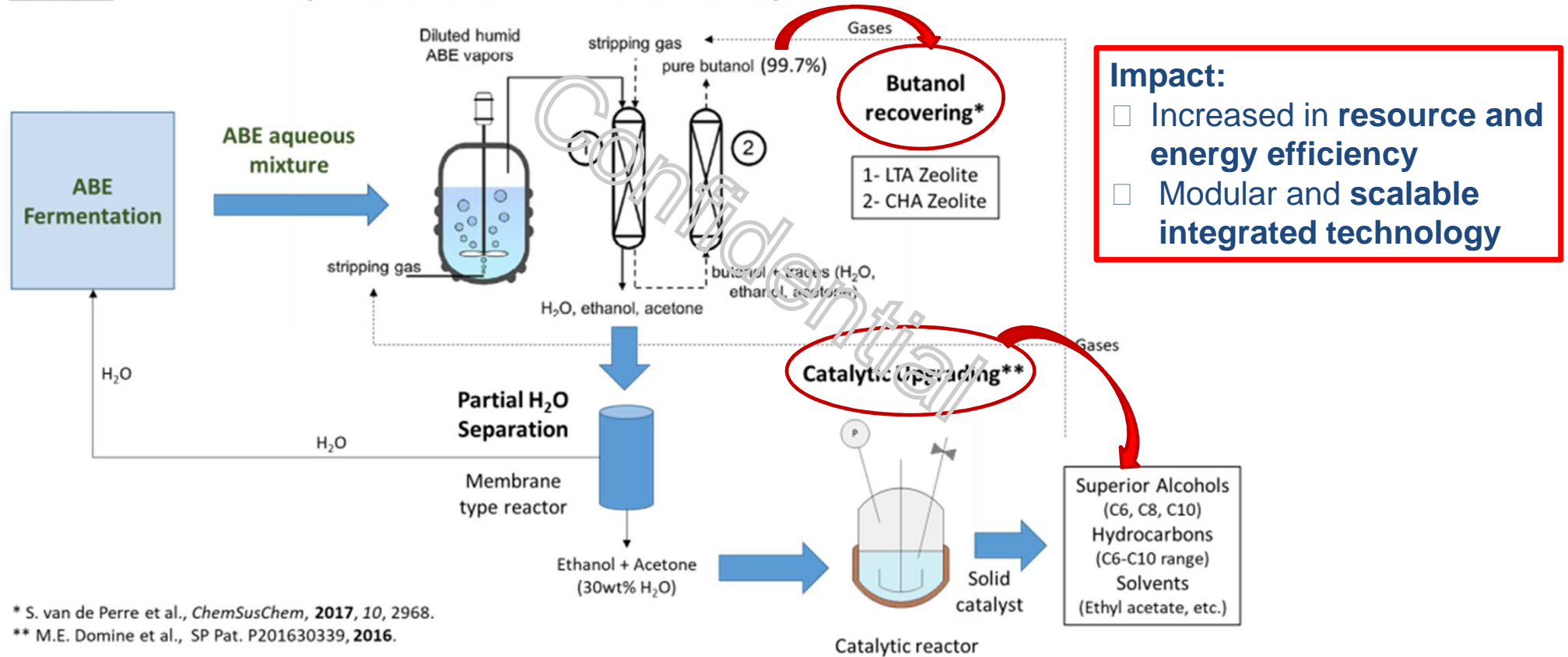
Our capacities related with the project are:

- *Hybrid chemo and biocatalytic technologies based on catalysis maximizing efficiency and selectivity (see next example)*
- *Membranes and adsorption for integrating different separation and purification steps (TRL5)*
- *Design of reactors: from multi batch to continuous systems*
- *Green chemistry for lowering process environmental footprint (see our publications)*



Downstream processes to improve efficiency and valorisation of byproducts

Example: Downstreams processes for the fermentative ABE aqueous mixture valorization



EXISTING PROJECT CONSORTIUM

We look for:

- Fermentation and bio-industries
- End users



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We have projects/collaboration with industry and academy:



ExxonMobil



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reaching new frontiers



BASF
We create chemistry



A modern notebook since 1934

SUMITOMO



Johnson Matthey



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Eduardo Palomares
Instituto Tecnología Química (UPV-CSIC)
Camino de Vera s.n.
46022-Valencia (Spain)

Tel. +34963877800
Fax: +34963879444
Email: apalomar@iqn.upv.es

<http://itq.upv-csic.es/en/>

Also interested in:

CE-SPIRE-08-2020: *Improved Industrial Processing using novel high-temperature resistant materials*

CE-SPIRE-07-2020: *Recovery of industrial water, thermal energy and substances contained therein*