



# Supergen



# Supergen Bioenergy Hub

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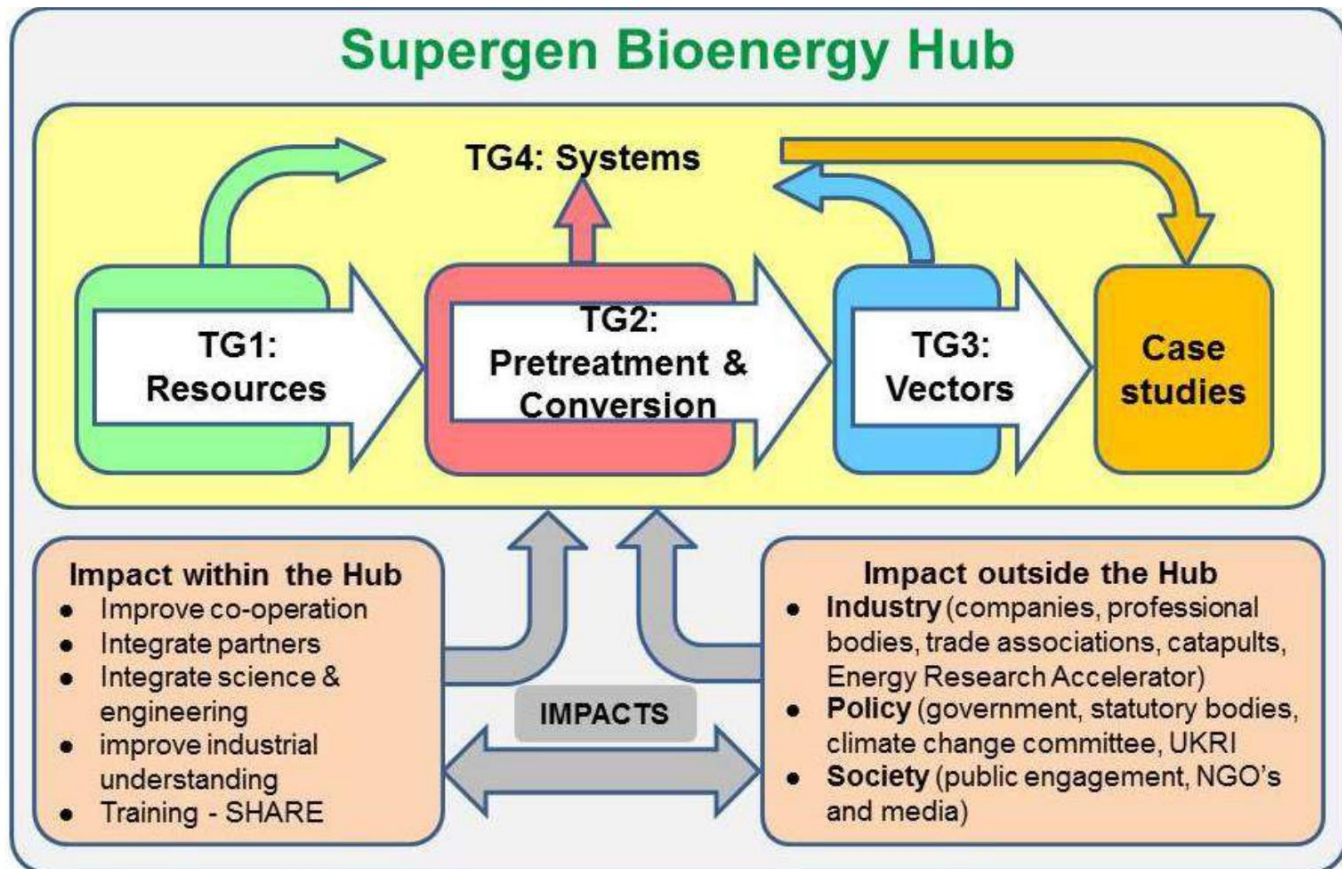
# Supergen



## Introduction

- £6M research hub into bioenergy technologies covering biological, thermochemical and catalytic processes
- Cross-cutting activities on sustainability, policy, economics, energy system integration
- Public and policy engagement remit
- August 2018 – July 2022
- Led by University of Manchester with inputs from many other UK universities
- REA supported

# Overview of 4 topic groups



## Potential case studies

### RESOURCES

- UK agricultural product e.g. energy crop or residue
- Lignocellulose (woody biomass or waste)
- Organic wastes e.g. waste wood & MSW
- Difficult wastes
- Dry brown biomass & waste & wet biomass & waste
- Woody material e.g. forest residues and coppice
- Process residues from bio-processing

### PRETREATMENT & CONVERSION

- Biocatalysis
- Catalytic conversion
- Chemical conversion
- Digestion
- Fermentation
- Fractionation to simple sugars
- Hydrolysis & separation,
- Hydrothermal processing
- Omnivorous catalytic technology
- Pyrolysis
- Saccharification
- Gasification to syngas
- Separation
- Synthesis of alcohols
- Synthesis of hydrocarbons
- Thermal conversion of residues
- Upgrading

### VECTORS

- Animal feed
- Aviation fuels
- Biofuels
- Biomethane
- Bulk chemicals
- Electricity
- Ethanol
- Fertilizer
- Fine Chemicals
- Fuel gas
- Heat
- Hydrogen
- Liquid fuels
- Syngas



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Bioenergy

# Mapping of UK bioenergy



# Getting involved

- 2018 Scoping meeting with REA members to prioritize future bioenergy pathways
- Input sought from REA members on case studies (members provide process/technical data; hub partners provide analysis of sustainability)
- Opportunity to define challenges that UK researchers will then pursue jointly with industry and RCUK funding





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More information  
[www.supergen-bioenergy.net](http://www.supergen-bioenergy.net)

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