

## TSB & Innovation Norway funding opportunity

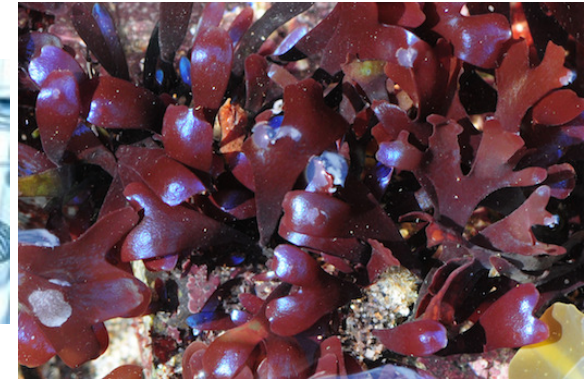
*Sustainable high value chemical  
manufacture through industrial  
biotechnology*

**Michelle Carter**

Knowledge Transfer Manager

Biosciences KTN (Industrial Biotechnology)

[www.innovateuk.org/biosciencesktn](http://www.innovateuk.org/biosciencesktn)



IB is defined as “*the use of biological substances\* for the processing and production of enzymes, chemicals, materials and energy*”.

\* *plants, algae, marine life, fungi, micro-organisms*

The estimated **global market** for IB by 2025:

£150 bn - £360 bn

Whilst for the **UK**:

£4 bn - £12 bn

Across a range of sectors: *personal care, pharma, food/drink, biofuels & other chemical sectors.*

IB can play a critical role in maintaining UK competitiveness in global markets and in the creation of a low-carbon knowledge-based economy in the UK.

Technology Strategy Board  
Driving Innovation



Sustainable high value  
chemical manufacture  
through industrial  
biotechnology

COMPETITION FOR FEASIBILITY  
AND COLLABORATIVE R&D FUNDING

OCTOBER 2012

**TSB & Innovation Norway are funding  
this call to help stimulate the application  
of IB by UK & Norwegian industry**

INNOVASJON  
NORGE

## CR&D

- Business-led
- Project budget - £500k - £1m
- 50% public funding
- Demonstration projects (post bench/pilot scale)
- Include end-user
- Project duration <2y
- Market exploitation by 3y

## Feasibility studies

- Business-led
- Project budget - £150k – £200k
- Single company or collaborative
- Pilot scale
- Project duration 6-9 mo
- 75% public funding
- Market exploitation by 5y

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## Business models


Modelling, analysis & simulation to optimise & predict performance for:

- new business models
- novel biological routes
- multiple product streams
- new value chains
  
- Business – led
- Single company or collaborative
- <3 mo duration if leading to feasibility
- <9 mo if run in parallel
- 75% public funding
- Project budget - £10k to £33k



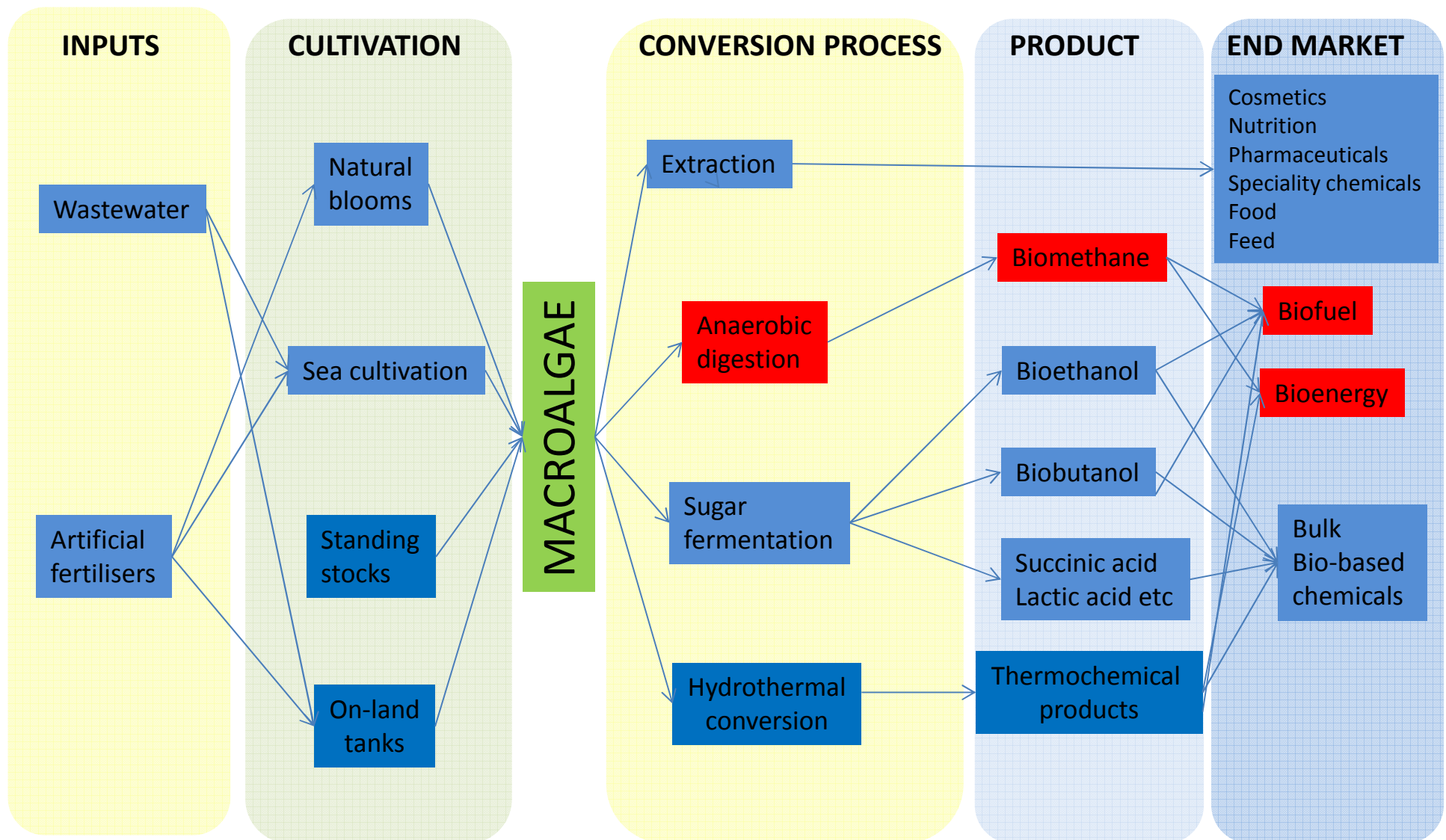
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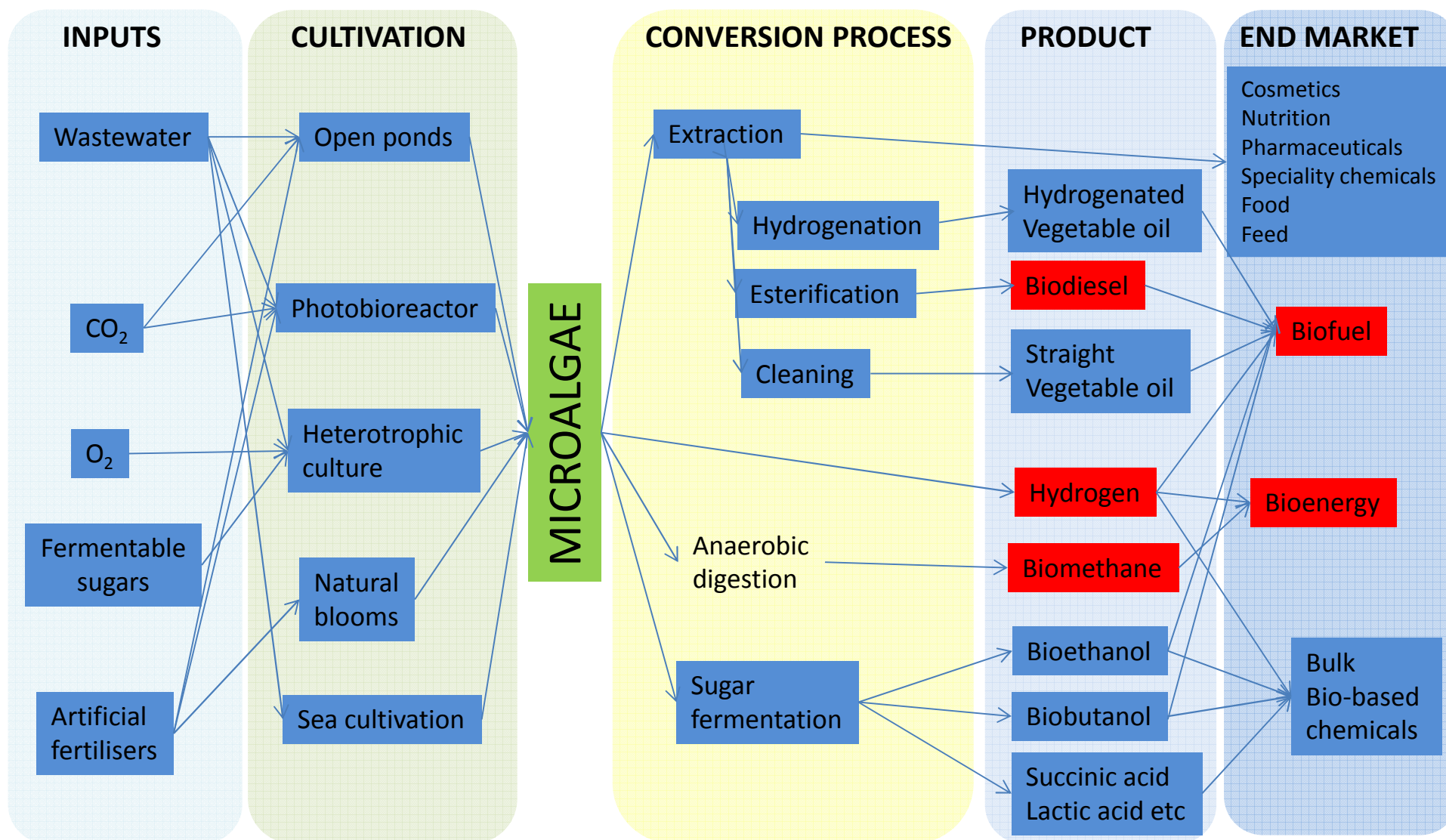
## Utilise sustainable biobased feedstocks and/or biocatalytic processes to produce chemicals

- Extraction of HVC from biomass
- Identification & optimisation of biocatalysis for chemical production
- Optimisation & development of biotransformation processes
- Novel bioreactors & downstream processing
- Use of green solvents &/or recycling of solvents
- Valorisation of biomass (e.g. agri waste; plant, **algae**, marine waste) to chemical products:
  - Platform chemicals
  - Surfactants, lubricants, and polymers
  - Fine & speciality chemicals



■ Not in scope for Technology Strategy Board HVC competition 2012 (unless a co-product)

Figure adapted from the Report for the Algal Bioenergy Special Interest Group: *Research needs in ecosystem services to support algal biofuels, bioenergy and commodity chemicals production in the UK*, February 2012





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## Key dates


### Key dates:

Competition opens	1 October 2012
Briefing day	4 October 2012
Registration deadline	7 November 2012
Deadline for applications	14 November 2012
Applicants informed	18 December 2012



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INNOVATION  
networks



# Technology Strategy Board

Driving Innovation



Previous UK-Norway projects supported by TSB & IN

## Marine Bioprocessing of sustainable marine resources for the production of high value chemicals

- Testing of a fish by-product as a fermentation supplement
- £200k
  - **HVM Catapult (Centre for Process and Innovation)**
  - **Marine Bioproducts**



# Technology Strategy Board

Driving Innovation



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## Production of natural marine functional ingredients for skin care

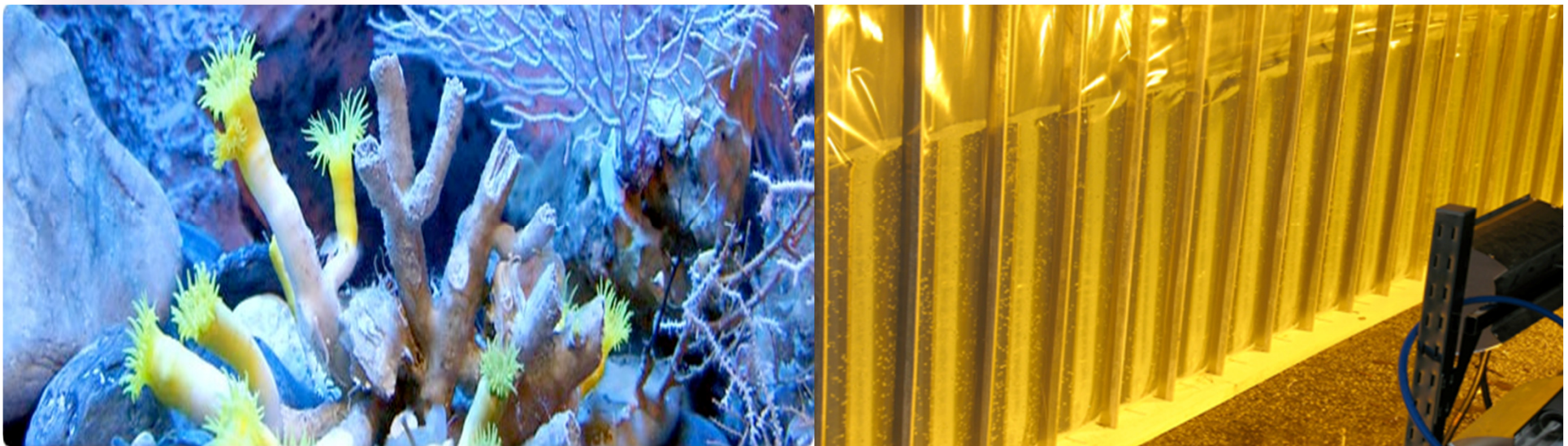
- Identify natural marine ingredients that could replace the petroleum-based components used extensively within the skincare market
- £195k
  - **Aquapharm**
  - **AquaBioTechnology**



Previous UK-Norway projects supported by TSB & IN

## Pilot scale production of a biologically active polysaccharide from a marine microalgae using photobioreactor technology

- To determine whether an identified polysaccharide can be produced at pilot scale in an algal bioreactor system
- £160k
  - Glycomar
  - MicroA



# How KTN's can help you

The screenshot shows the KTN Biosciences website interface. At the top, there's a navigation bar with 'Open Innovation' and 'Logout' on the left, and 'Home', 'People', 'Networks', 'Events', 'Organisations', and a search bar on the right. Below the navigation bar, there's a sidebar with 'Settings', 'Control Panel', and a user profile for 'Michelle Carter' with links to 'My home', 'My profile', 'My places', 'My contacts', 'My blog', and 'My documents'. The main content area features a 'Biosciences Knowledge Transfer Network' header with a plant image and a 'You are joined to this network' message. Below this, there's a 'Welcome to the Biosciences KTN' section with a sub-header 'Driving the conversion of the UK's bioscience knowledge into innovative agricultural, food and industrial bioscience products and processes'. A list of benefits includes 'Access information and news', 'Find funding and collaboration opportunities', and 'Network and share ideas'. The 'Our Priority Areas' section highlights four categories: 'FOOD FOR HEALTH', 'INNOVATION IN ANIMAL & PLANT PRODUCTION & PERFORMANCE', 'RENEWABLE & SUSTAINABLE BIOPRODUCTS', and 'SUSTAINABLE FOOD SUPPLY & SECURITY'. A 'Latest articles' section lists several recent posts, including 'EC calls for tender: Animal welfare and reduction of boar taint', 'Call for tender: Trace elements in animal nutrition', 'Funding for UK-USA collaborations in pathogens of animals and crops', 'FINAL FEW DAYS TO REGISTER - Leading IB: Focus on bio-based products', and 'Marine Biotech workshop: BIOPROSP'. A footer banner encourages users to 'Click to access further details & register for our Annual Conference!' and 'Impact through Biosciences'.

Find partners  
Funding opportunities  
Themed events  
Latest research

Stay connected!

[www.innovateuk.org/biosciencesktn](http://www.innovateuk.org/biosciencesktn)

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Control Panel

Michelle Carter

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International &gt; Norway and UK

## Norway and UK Official Group

 You are joined to this group


Overview

Our group &gt;

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### Launch of NEW UK-Norway Funding Opportunities

The Technology Strategy Board ([www.innovateuk.org](http://www.innovateuk.org)) is to invest up to £2.75 million to encourage the development and commercialisation of innovative processes that will generate high-value chemical products through industrial biotechnology and renewable feedstocks.



### Sustainable high value chemical manufacture through industrial biotechnology

Applications are invited for technical feasibility studies, industrial research feasibility studies and collaborative research and development projects.

The aim of the competition is to assist businesses in de-risking new processes and developing projects through to pilot and to demonstrate scale. Projects that consider novel or under valorised biomass sources such as agriculture or marine by-products, as well as those that take a bio-refinery approach to multi-product systems, are encouraged.

Projects must be led by a UK business and are open to the inclusion of one or more Norwegian companies – Innovation Norway intends to provide additional funding to Norwegian companies that join UK-led projects. Feasibility projects can be single company or collaborative. Collaborative R&D projects must be run at demonstration scale and include an end user.

The competition opens on 1 October 2012 and applications must be submitted by 14 November 2012. There will be a briefing event for potential applicants, in London, on 4 October 2012. For further information about the competition please visit [here](#).

### Norwegian Industrial Biotech Network

The Industrial Biotech Network is a public-private partnership supported by Innovation Norway, The Norwegian Research Council and SIVA. Its mission is to support venture and technology

### Newest members



**Kirk Malone**  
Research Team Leader  
Joined: 03 September  
[Request contact](#)



**Sara Burbi**  
PhD Researcher  
Joined: 29 May  
[Request contact](#)



**markk steinn**  
Joined: 23 April  
[Request contact](#)



**Simon Broome**  
Joined: 20 March  
[Request contact](#)



**Margaret Blance**  
not-specified  
Joined: 20 February  
One of your contacts

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### Latest sub-groups

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