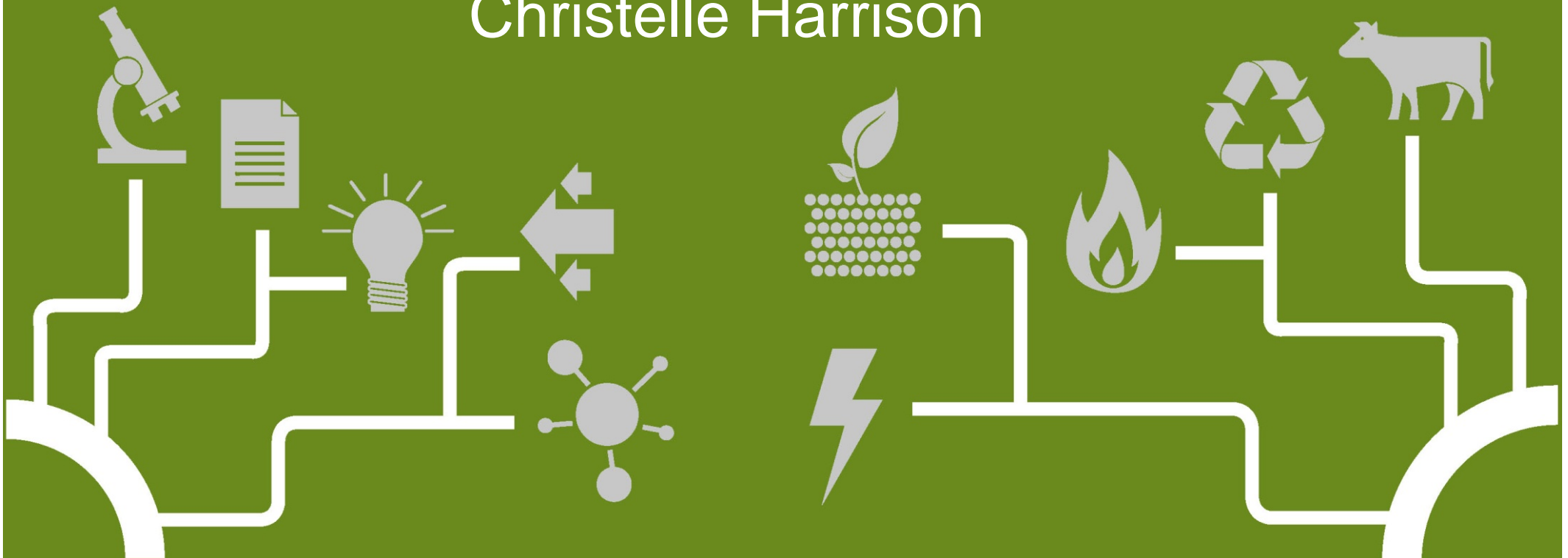


# EBRI Research Interests & Collaboration Opportunities

Christelle Harrison



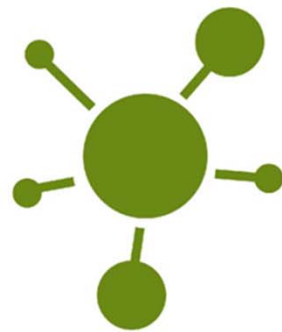
# Presentation outline

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- Research and resources
- Projects
- Work with & access to UK bioenergy companies

# Core Objectives

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**Research**



**Technology**



**Pilot Project**



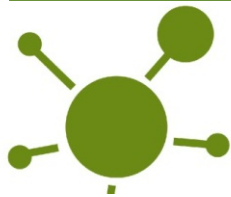
**Industry  
Application**



- Operate across the value chain
- Multi-disciplined & cross-sector research



- New Institute opened in 2013



## EBRI's Research Interests:



Intermediate / Fast Pyrolysis

Inter: 100kg/h - 20kg/h  
Fast (cont.) 7kg/h  
Slow & torrefac.



Gasification

Fixed fluid bed: 400kg/h  
Circ. fluid bed: 10kg/h  
Twin & drop tube



Feedstock Analysis



'Green' Hydrogen

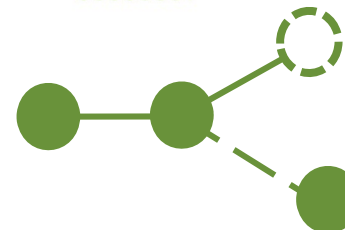


Bioenergy Markets

Multiple services



Biochar Analysis



Catalysis

Characterisation &  
synthesis



Biofuel Analysis

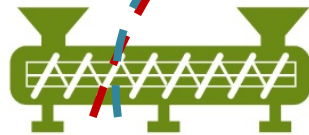
Characterisation  
Test engines



Algae Cultivation



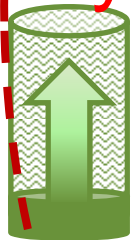
## EBRI's Technology Interests:



### Pyroformer

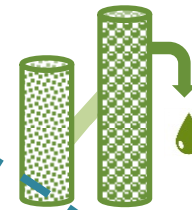
Thermo-chemical technology to convert biomass into oils, gases and biochar

**Pyro-gas project**



### Gasifier

Thermal technology to convert biomass into H<sub>2</sub> and CO gaseous fuels



### Fast Pyrolysis

Conversion of solid biomass into a valuable liquid fuel or 'bio-oil'

**BioenNW project**  
**SUPERGEN Challenge**  
**Anaerobic Digestion**



Biological digestion technology to convert biomass into biogas – can be 'liquid' or 'dry' AD

- ▶ EBRI delivers a range of projects. Our ERDF project in the West Midlands focusses on collaboration with regional businesses



Demonstrate technology and support regional businesses to benefit from new bioenergy technologies



Transfer of technology and knowledge to partners in North West Europe



Technology demonstration and biochar field tests for rural communities in India





## EBRI ERDF Project:

Aston University and ERDF co-financing the development of EBRI as a regional centre of excellence in bioenergy technologies

**Capital** investment to build new industrial scale demonstrator facility on campus and provide research & testing facilities

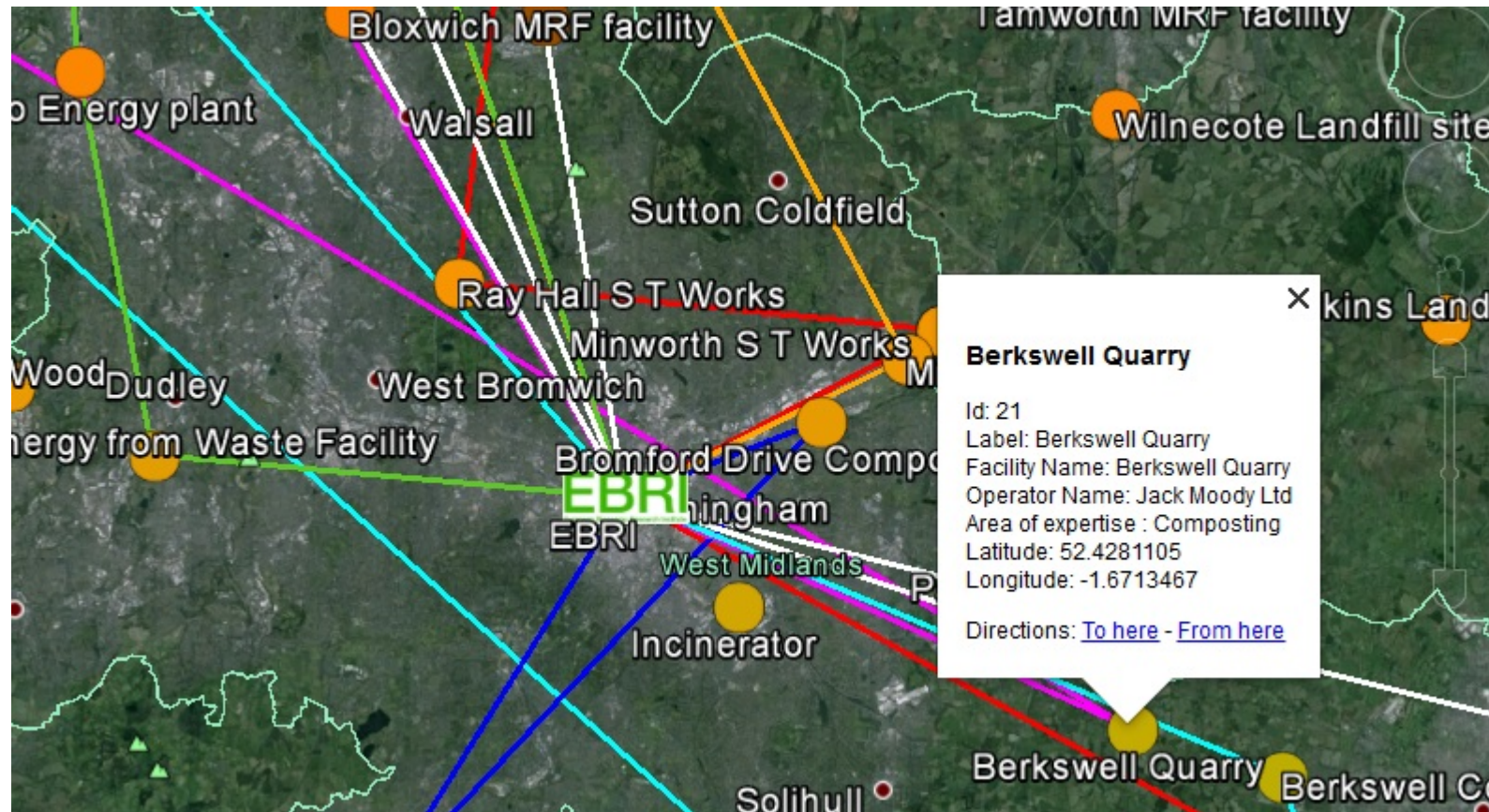
**Revenue** budget to collaborate with regional businesses to ensure that business opportunities from EBRI's work stay within the region.

### Outputs:

- **Construction of new EBRI building**
- **100 'Business Assists' (80 SME)**
- **80 'Business Collaborations'**
- **1 'Spin Out' Company**







- Access to bioenergy companies within the UK
- Mapping the bioenergy ecosystems

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## Links

- EBRI: <http://bioenergy-midlands.org/>
- BioenNW: <http://bioenergy-nw.eu/>
- Pyrogas:  
<http://www.aston.ac.uk/eas/research/groups/ebri/projects/pyrogas-project/>
- SUPERGEN Challenge: <http://www.supergen-bioenergy.net/home/Research%20Projects/Increasing%20the%20energy%20yield%20from%20the%20integrations%20of%20anaerobic%20digestion%20and%20pyrolysis>

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# Thank you for listening

[c.harrison@aston.ac.uk](mailto:c.harrison@aston.ac.uk)