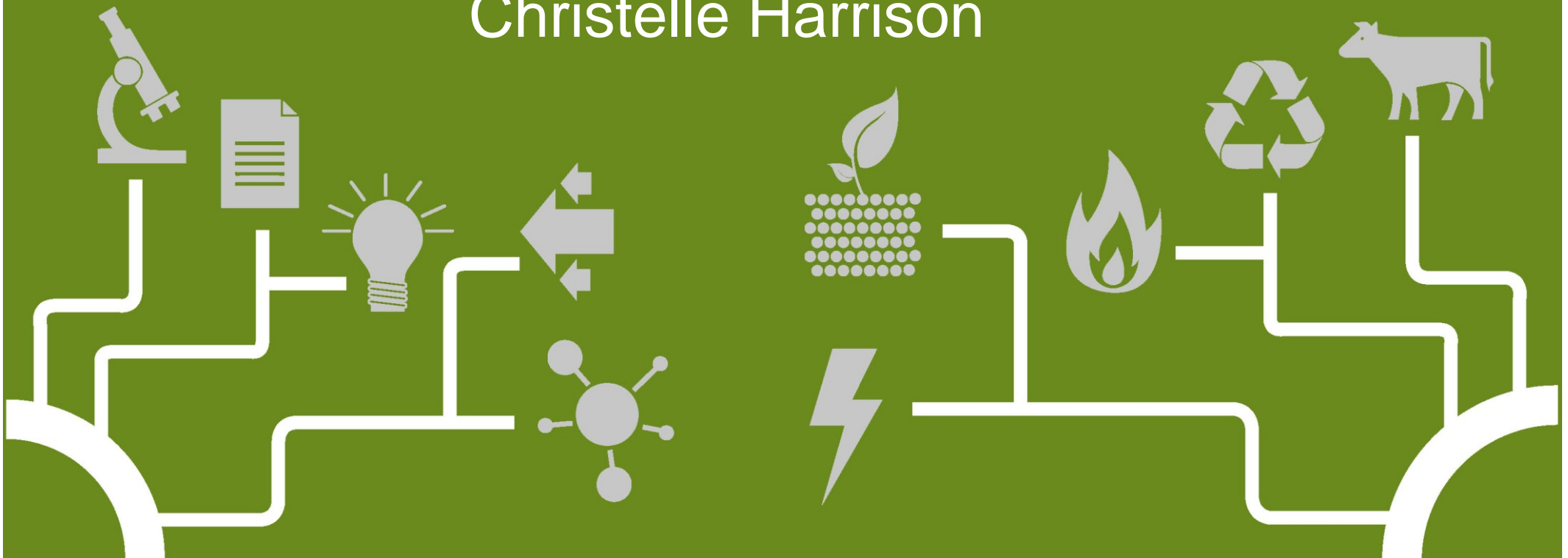


EBRI Research Interests & Collaboration Opportunities

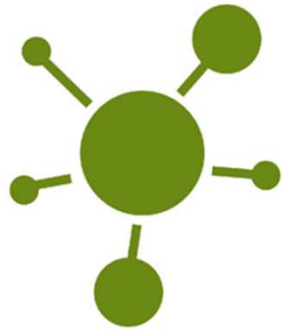
Christelle Harrison



Presentation outline

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

Core Objectives



Research



Technology



Pilot Project



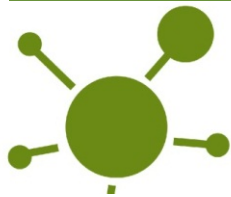
**Industry
Application**



- 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

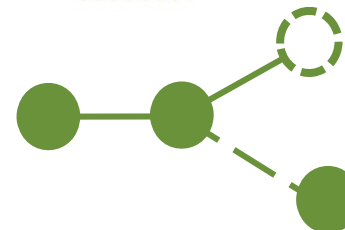


Bioenergy Markets

Multiple services



Biochar Analysis



Catalysis

Characterisation &
synthesis

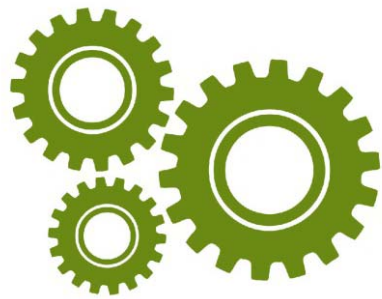


Biofuel Analysis

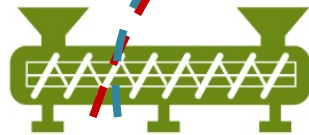
Characterisation
Test engines



Algae Cultivation



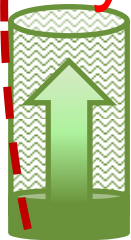
EBRI's Technology Interests:



Pyroformer

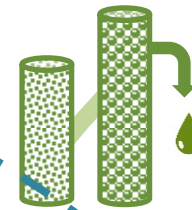
Thermo-chemical technology to convert biomass into oils, gases and biochar

Pyro-gas project



Gasifier

Thermal technology to convert biomass into H₂ 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

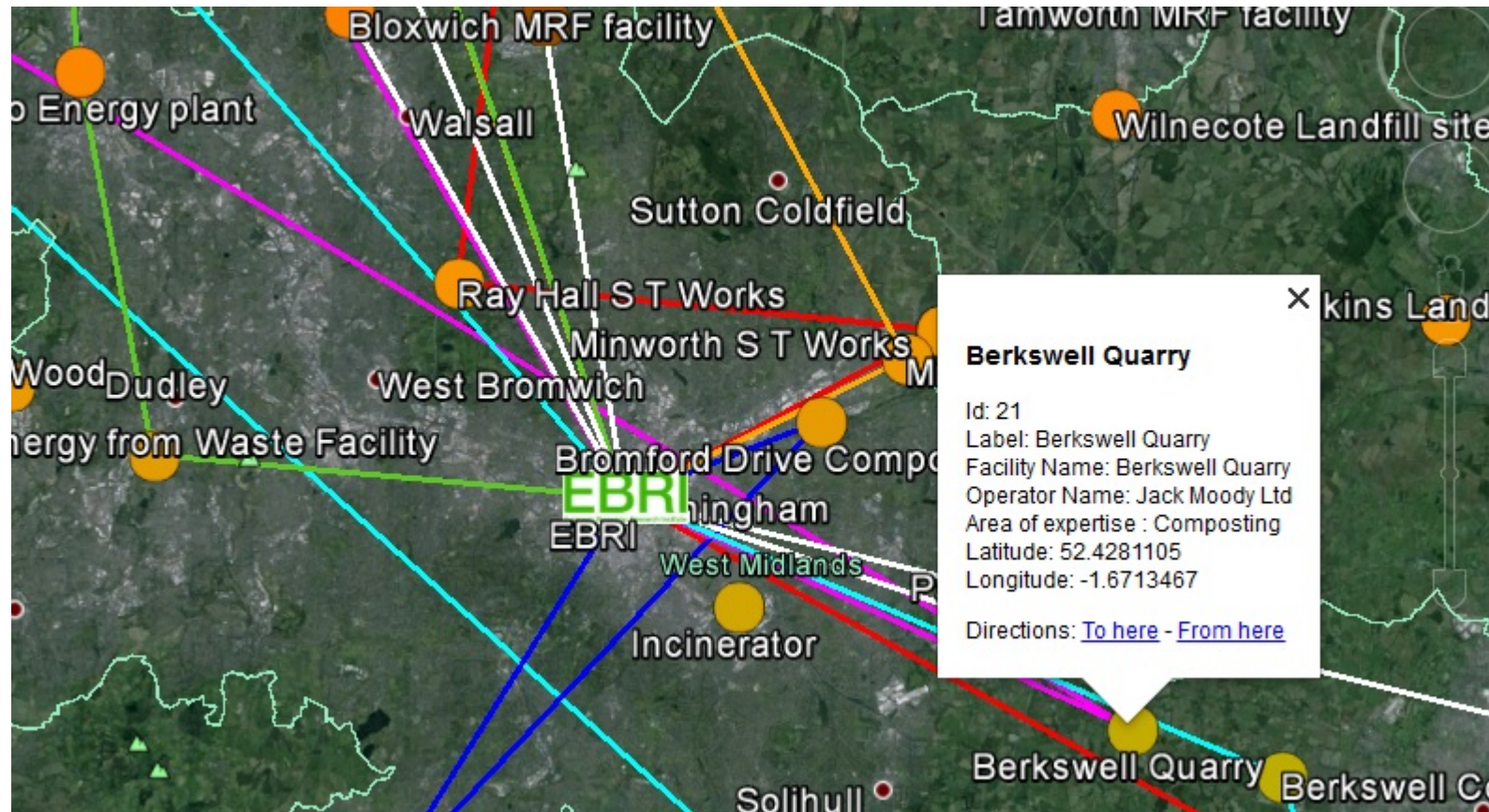
Capital investment to build new industrial scale demonstrator facility on campus and provide research & testing facilities

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

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>

Thank you for listening

c.harrison@aston.ac.uk