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## Managing Projects, Managing Knowledge

Loughborough University, KM Module



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## **Energy Technologies Institute**

The Energy Technologies Institute is a partnership between global energy and engineering companies and the UK Government.

Our role is to act as a conduit between academia, industry and government to accelerate the development of low carbon technologies.

We bring together engineering projects that develop affordable, secure and sustainable technologies to help the UK address its longterm emissions reduction targets as well as delivering nearer term benefits.

We make targeted investments in a portfolio of technology programmes across heat, power, transport and the infrastructure that links them.

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#### ETI programme associate



ETI members





# What is the ETI?







#### ETI Invests in projects at 3 levels **Technology Demonstration** projects Large projects delivered primarily **Technology Development** by large companies, system projects integration focus typically .... typically .... £5-15m, 2-4 years **Knowledge Building Projects** £15-30m+, 3-5 years **TRL 3-5** TRL 5-6+ typically .... up to £5m, Up to 2 years

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# Knowledge building to:

- » Inform industry decision making through robust, shared evidence and commercially available projects
- » Build a better understanding of decarbonisation potential in developing industries
- » Inform policy debate

# Developing technology to:

- » Build supply chain capability
- » Create economic opportunities
- » Exploit UK technology knowledge and skills







# Demonstrating technology to:

- » De-risk new systems
- » Focus and accelerate low carbon innovation
- » Build investor confidence



# Strategic analysis and planning to:

» Develop an internationally peer-reviewed national energy system design and planning capability

- » Identify the lowest-cost decarbonisation pathways for the UK energy system
- » Produce technology and industry sector insights and develop whole system modelling capability





#### Knowledge is key to the way ETI operates







# CO<sub>2</sub> Storage Appraisal as an example of ETI knowledge as a product...







## **Prioritising stakeholders**

#### Level 1:

Proactively engage to develop 1:1 relationships and understand needs. Shape knowledge/narrative to meet their needs. Provide them with specific, relevant messages.

#### Level 2:

Proactively engage to communicate clear, generic knowledge and narrative - provide key messages

#### Level 3:

'Broadcast' clear, generic knowledge and narrative - provide key messages





# **Delivering Impact**

Delivery Activity that creates project 'outputs'

#### Action

Creation of project **'benefits'** for relevant communities of users/beneficiaries Impact Defined project 'outcomes' have been achieved

#### Delivering:

- knowledge for beneficiaries
- knowledge about beneficiaries
- knowledge from beneficiaries





## 'Closing the loop' to deliver the ETI's outcomes







# People

G	Knowledge management is 'the way we do things'. Peers help peers across organisational boundaries. People rapidly find out who knows what and are able to talk to them. High levels of trust exist within the organisation.
А	Most people say sharing knowledge is important to success. They capture what they know for others to access and searching before doing is encouraged.
R	Prevailing culture is one of 'knowledge is power' – knowledge hoarders appear to be rewarded and people rarely find the time to learn from what they do or share new knowledge with others.

Evidence:

- Our culture values knowledge seeking and problem solving
- Significant collaboration apparent among employees
- Teamwork is encouraged
- Individuals are encouraged to ask
- In some cases lack of trust limits knowledge sharing
- Knowledge sharing not seen by everyone as a strength
- Employees do not always feel empowered to explore new possibilities
- There is some fear of punishment when mistakes are identified

#### Example:

Regular team meetings, departmental meetings and lunch and learns facilitate the exchange of knowledge between people across the organisation.





# Accelerating Low Carbon Energy Innovation In The UK

The UK needs innovation to help it meet its carbon targets



Successful innovation has several critical components: market confidence, finance, public policy and the capability to innovate Collaboration and shared understanding is required to help the innovation process



involving interactions across science, business and government to facilitate knowledge transfer and learning

innovation

it is easier to achieve a transition with a shared understanding of the drivers of new low carbon energy technologies



Most low carbon markets are almost entirely driven by public policy but delivered by private sector firms.



Policy interventions are required to drive innovation in energy and low carbon



business needs certainty so policy stability matters

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They depend on multiple interactions between different actors

Successful innovation in low carbon energy requires new technology capabilities, new markets, new business models together with appropriate changes to the regulatory framework



the less time the UK will have to transition to a low carbon economy and the more expensive it will be to do so

The slower the pace of energy







Registered Office Energy Technologies Institute Holywell Building Holywell Park Loughborough LE11 3UZ



For all general enquiries telephone the ETI on 01509 202020



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