



Denise Massey

Managing Director

**ENERGY
INNOVATION
CENTRE**

“The EIC is determined to serve as a broker, a partner, a scout, a facilitator and a gateway for innovation.

In 2016/17, we continued to raise the ambition of collaborative innovation projects for industry and innovators.

We brought the right people together, explored the challenges that impact our tomorrow and delivered change to meet the needs of our collective communities.

We have seen growth, more than doubling the innovation projects we deliver since 2013. We have increased our reach, with 22% of our innovation community members now international. We have picked up the pace, with more innovations transferred to business as usual within industry than any other year.

We are sad to see Mark Horsley retire from his Chairman role this year but are very thankful for all he has done for the EIC since 2013. His expert industry insight has proved invaluable and his unwavering support has allowed the EIC to flourish.”



Mark Horsley

CEO



Innovation in the energy sector has never been more important than it is today. With growing populations, rising bills and our desire for greater flexibility in the way we heat our homes and power our vehicles, it's a fast evolving landscape with significant challenges.

As a gas distributor, we are always working to improve the services that we deliver to give our customers value for money and meet global challenges such as climate change.

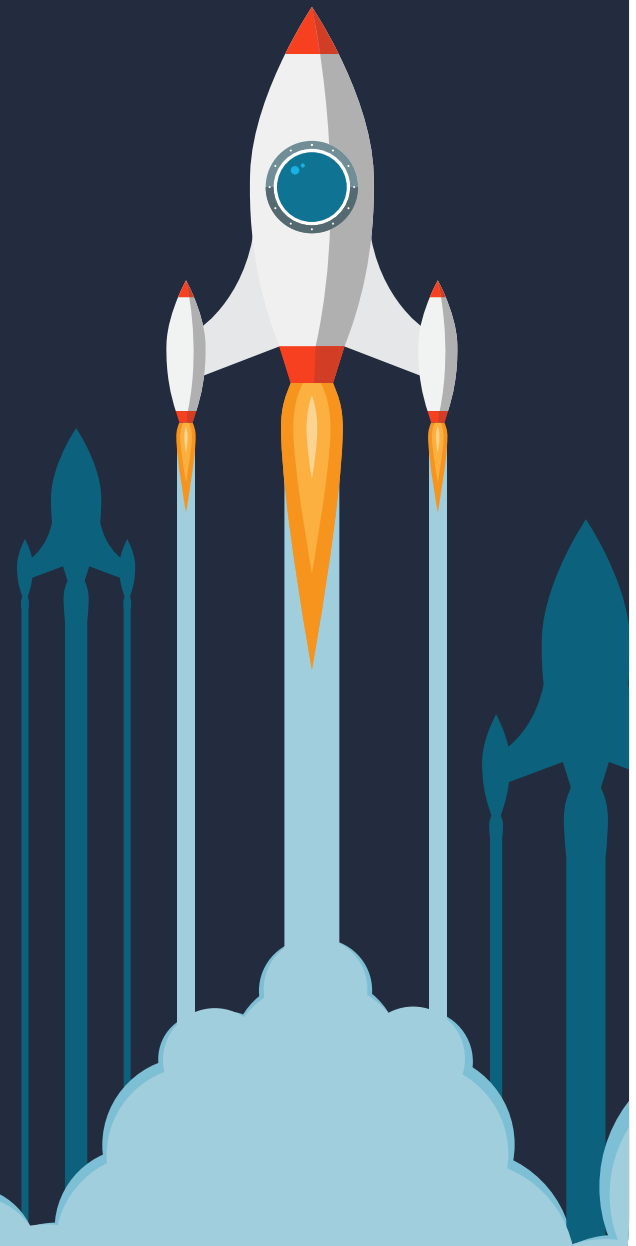
The EIC provides a unique engagement forum for us to source expertise from a diverse group of businesses. It's an invaluable partnership that brings industry and innovators together, and one that ultimately benefits the customer as well as business.

I'm retiring from the Chairman's role this month, but I've greatly enjoyed watching the EIC thrive and go from strength to strength, which is down to the wonderful team and Denise's inspirational leadership. I'm very excited to see what they do next.

The Energy Innovation Centre (EIC) is established, expert and connected.

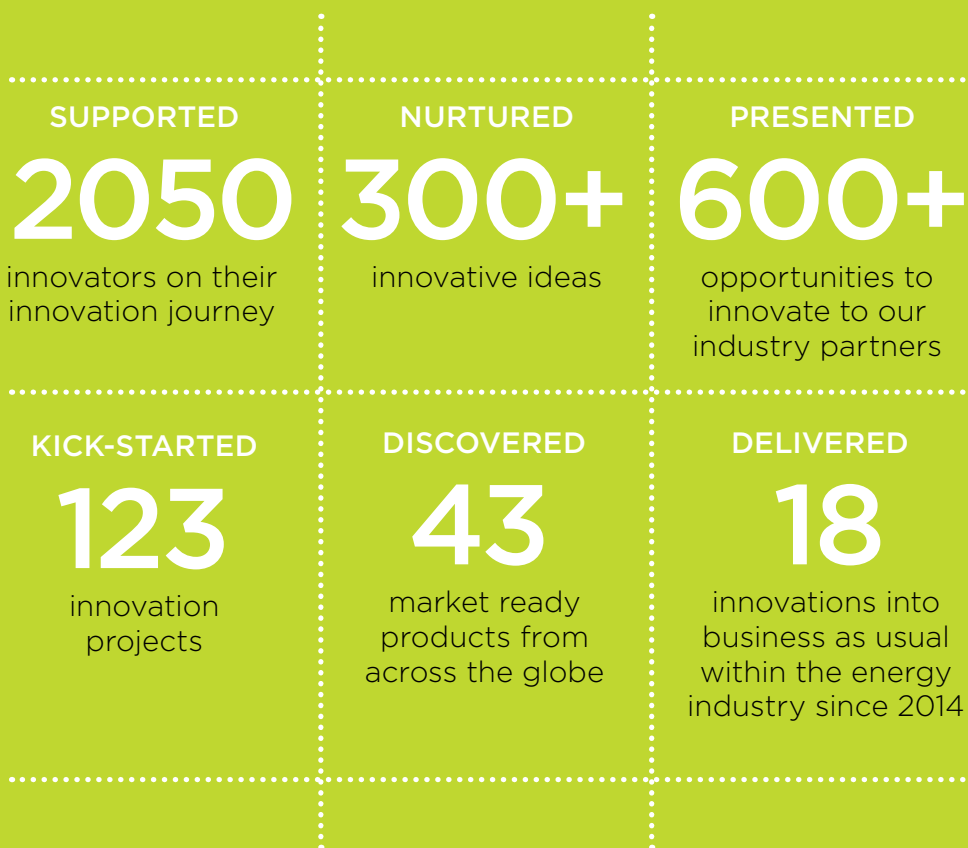
Linking industry with innovators, we accelerate the discovery, development and deployment of innovation across the energy landscape, with the aim of securing a demonstrable return for the energy customer.

We scout for bright ideas, bring the right people together, explore the challenges that impact our tomorrow, deliver game-changing projects, shape shared goals and foster meaningful collaboration.



Over the past **five** years

Since 2012, the EIC has:



ENERGY INNOVATION CENTRE

Our innovation **community**

Our innovation community is diverse, driven and dynamic.

Our innovators are primed to meet the challenges set by the energy industry and are able to deliver game-changing results and compelling cost savings when they are given the opportunity to collaborate.

Our innovation community is global and growing fast. Over the past nine years, it has grown to over **2000 innovators** with bright ideas and specialist skills. They are continually problem solving on behalf of industry.

With the help of our brand new digital platform the EICHub, this community is set to reach **5000 members by 2022.**

2016/17

313

**expressions
of interest**
received

71

innovations
presented to
industry

6

new innovations
delivered into
business as usual
within the
industry

355

new innovators
in our global
innovation
community



Our industry partners

**We share the innovation
ambitions of our industry
partners.**

They are committed to collaborating with third parties and leveraging the power of innovation to realise an energy system of the future that has the customer at its heart, and is responsive to changing needs.



£17.8m

investment
brokered for the
energy industry
since 2008

24

calls for
innovation
launched

7

innovation labs held
in conjunction with
industry partners
& **500+** challenges
identified

30

projects
with third party
innovators signed

369

leads generated
115 of which are
international

**ENERGY
INNOVATION
CENTRE**
2016/17



SPOTLIGHT
ON
PROJECTS

1

SAVING TIME & REDUCING COSTS: Self-healing cable additive

Electricity distribution networks are collaborating on a new technology which is environmentally friendly and could result in millions of pounds of savings each year.

The project aims to reduce or eliminate non-catastrophic cable leaks through the introduction of a self-healing fluid.

Under normal operation, it will function as an insulation oil, but upon the formation of a breach, the self-healing fluid will react to form a solid mass that will stop the leak and prevent further leaks, preserving both the cable and the local environment.

2

HELPING VULNERABLE CUSTOMERS: iViTi ON

A trial of a new light bulb technology is helping vulnerable customers stay safe in their homes when power is lost.

The pioneering iViTiON bulb detects when power has been lost and switches to its battery mode, producing up to three hours of light at the same brightness as a regular 60-watt bulb.

The bulb fits like a conventional screw-in but contains a small battery which charges when turned on. The bulb uses LED technology, resulting in an energy saving of up to 80% compared to a standard lightbulb.



3

DELIVERING CUSTOMER BENEFITS: Societal impact study

First of its kind cross utility research project puts the true impact of utilities on society under the microscope.

Utility companies across the North East and Yorkshire and the EIC are working together to better understand the impact of utility maintenance, replacement and repair activities on local communities.

This project will explore appropriate metrics for assessing the social impact of network interventions. It will investigate how innovation can be used to maximise benefits, reduce the impact on local communities and drive up productivity.



4

FOSTERING CROSS-COLLABORATION: Beyond visual line of sight (BVLOS) drone operation

Paving the way for network-wide business as usual BVLOS drone operation.

Aerial inspections of network infrastructure can be expensive. The use of drones is now becoming recognised as a viable and cheaper alternative.

An EIC-led collaborative call – in conjunction with all of our industry partners – started the ball rolling to explore the use of drones to carry out technical inspection work in BVLOS mode.

An upcoming project will drive through engagement with the Civil Aviation Authority (CAA) and develop detailed safety cases to ensure compliance with existing regulations whilst sharing any cost or time implications.

5

MINIMISING THE IMPACT OF INTERVENTIONS Optomole Phase 4

Technology to help find the source of gas leaks into utility ducts is minimising the need for costly and disruptive excavation and repair works.

Now in Phase 4, this project investigates the development of a gas probe that can be deployed inside a cable duct to quickly, safely and accurately locate the source of a gas leak.

A unique combination of laser and fibre optic technology, the OptoMole system has already been successfully trialled in various conditions.

The next stage of the project will explore business as usual implementation across the gas distribution networks.

6

PROTECTING THE ENVIRONMENT: Hydromx

A unique heat based transfer solution is helping industry partners to reduce their business carbon footprint.

The UK gas and electricity networks have made a clear commitment to reduce their business carbon footprint.

A trial to test the use of Hydromx, a revolutionary heat transfer fluid that uses nano-thermo technology to increase the speed of heat transfer and reduce energy consumption, is being run on own-use boilers within the facilities of one of our network partners.

It is anticipated that the trial will result in the reduction of energy consumption in water boilers by up to 35% and decrease carbon outputs.



Shared learning

#CollectiveFuture Insights

Our forward-thinking **Insights** programme, delivered in conjunction with Energy Systems Catapult, is intended to examine ways to help innovators access industry more effectively.

Our research paper, **#CollectiveFuture Insights: Helping SMEs access the energy industry**, was published in May 2017 and shone the spotlight on relationships between the UK gas and electricity distribution networks and innovators from our global innovator community.

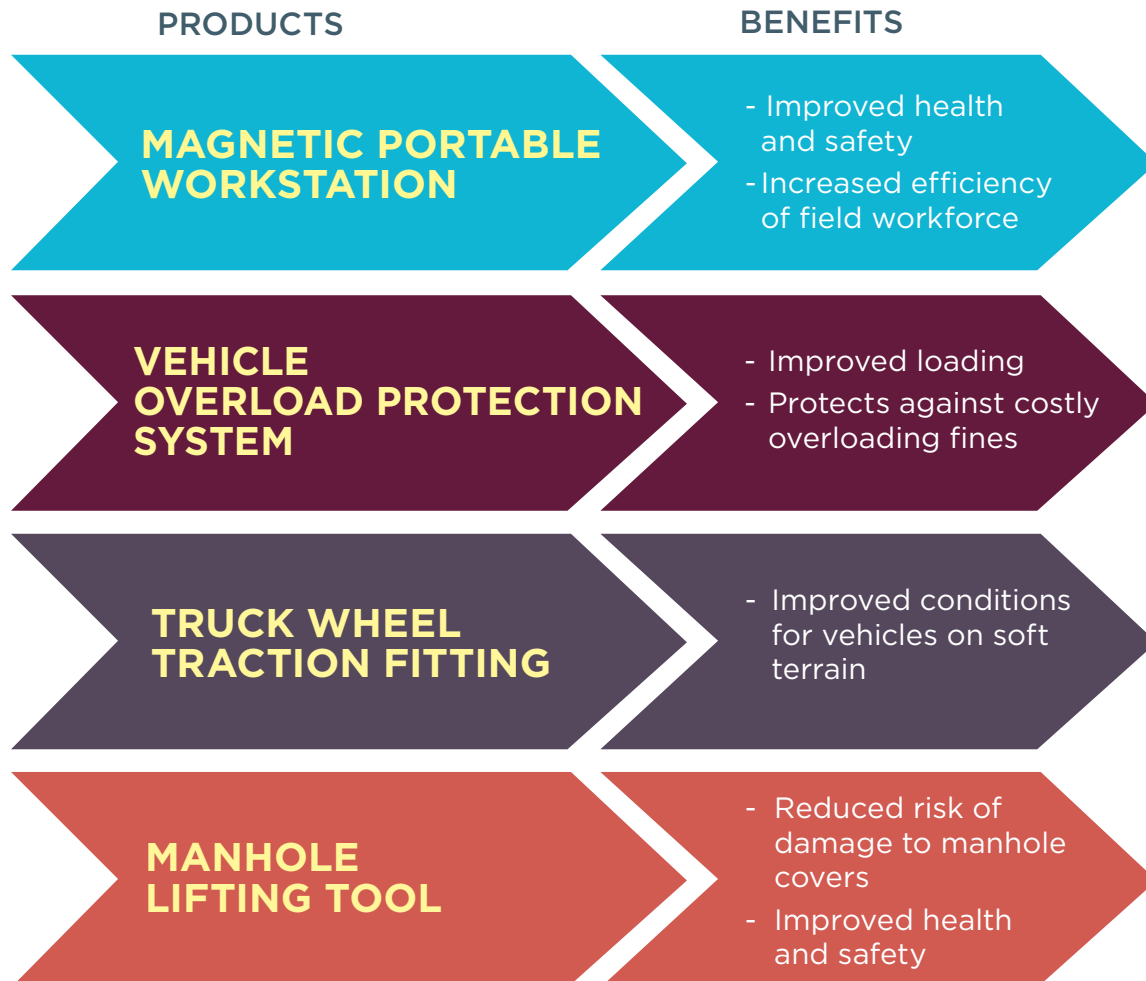
The report identified blockers and barriers to engagement and innovation adoption and developed an action plan to create stronger relationships between third parties with innovative ideas and technologies and the industry bodies that benefit from them.

In 2017, our **Insights** work is focused on delivering this action plan. Outputs include a comprehensive innovator toolkit and collaborative workshops.

CATAPULT
Energy Systems

INCREASING THE PACE OF INNOVATION ADOPTION

DELIVERING MARKET READY PRODUCTS





A new place to meet and network online

Access industry calls for innovation

Showcase your innovations to industry

Collaborate to develop your innovations & find new markets

Raise your profile by sharing your company updates via articles & videos

Keep abreast of industry news & opportunities

Sign up at www.EICHUB.com and discover new opportunities for your business





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