

WELCOME TO THE LAUNCH

Thursday 15 December 2022 Ingenuity Centre University of Nottingham









AGENDA

11.30am Roger Mendonca, Midlands Engine

The Midlands Engine and launch of the Midlands Green innovation Network and Midlands Green Innovation report

11.45am Faye McAnulla, Energy Research Accelerator
How businesses can work with universities

12.00pm Natalie Gasson-McKinley, Federation of Small Businesses
Introduction to work and update on the Local Skills
Improvement Plan, and how businesses can get involved

12.10pm Innovate to Thrive - Paul Yeomans, Knowledge Transfer Partnerships Manager, University of Nottingham

12.40pm Q&A

1pm Lunch and networking















Roger Mendonca

Chief Executive
The Midlands Engine









The Midlands Engine

MIDLANDS
GREEN
INNOVATION
NETWORK
Together for net-zero

- 11m people
- 100+ Parliamentarians
- 800,000 Businesses
- 23 Upper-Tier Local Authorities
- 1 Combined Authority
- 20 Universities
- 9 Local Enterprise Partnerships
- 100s NGOs

Advocacy - working **for** our region, **with** Government

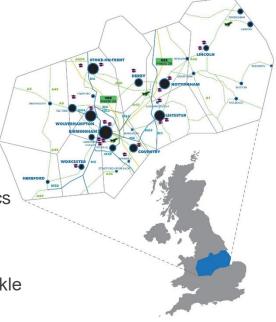
Influencing - shaping policy and investment to benefit our region

Convening - driving change through collective action in partnership

Identify and capitalise on major economic opportunities across Midlands geography.

Connect our region's businesses, parliamentarians, local authorities, academics and more and complement their activity to generate added value.

➤ Enable partner's to deliver initiatives that tackle what really matters in our region.









Ten Point Plan for Green Growth



- First pan-regional green growth action plan in the UK
- A unified pan regional vision and action plan for achieving Midlands net zero
- Over 300 partner voices across more than 130 organisations



decarbonise heat



TRANSPORT

Lead the transition

to reduce emissions























8 INNOVATION
Green design and making for economic growth

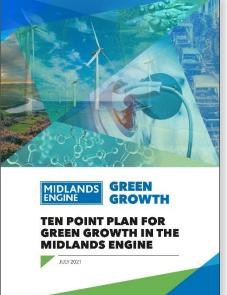






10 GREEN
FINANCE
Invest and enable to
unlock opportunity













Innovation in the Midlands





















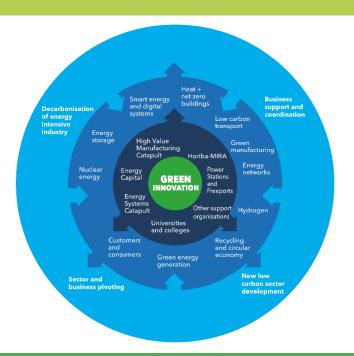




Midlands Green Innovation Report







							000000000000000000000000000000000000000
Smart en	ergy a	and di	igital syste	ms			Low carbon transport
Smart devices		Sma	rt buildings	Smart netv	vorks	Carbon and cost optimisation	Electric vehicles and batteries
Integrated sensors and forecasting				Smart tariffs and energy use			Hydrogen heavy vehicles and trains
Nuclear e	nerg	у		Energy s	torag	e	E-mobility and light rail
SMR AME		R Fusion		Electrical storage		Thermal storage	Net zero aviation
GDF	GDF Site deve		pment	Hydrogen storage		Systems integration	
Custome	rs and	cons	umers				Charging infrastructure
Heat as a service		Smart tariffs		Energy effic	iency	Community energy	Sustainable fuels
Green mobility (Gree	n jobs	Living labs			Recycling and circular economy
Heat & net zero buildings				Green energy manufacturing			Plastics
Heat pumps		District heating		Electrolyse and fuel o	ers	Batteries and	Batteries and magnets
Hydrogen boilers		Thermal efficiency		Green construction		Wind turbines	Energy and fuels from waste
Housing retrofit		Net zero construction		Heat pum		Nuclear	Pyrolysis, gasification, anaerobic digestion
		const	ucuon	boilers		components	Biochar and agriculture
Green energy go				Energy networks			Design for de-manufacture and re-manufacture
Solar		Onshore and offshore wind		Hydrogen and biogas distribution			Hydrogen
Green gas		Geothermal and mine water		Electric grid reinforcement			Hydrogen for heat
combustio	n	and r	nine water	Smart elec	tric an	d heat grids	Hydrogen for transport
Direct air	capti	ıre an	d CCUS				
Direct air capture technologies		Carbon cap utilisation		ture and Carb		on offsetting	Hydrogen for industry
CO, storage			Carbon integration into materials		Vertical farms and agriculture		Green hydrogen generation Distribution and storage







Midlands Green Innovation Opportunities





EMERGE Energy-from-Waste Plant (Image: Uniper)



West Burton STEP Fusion Site (Image: UKAEA)



 $Small\ Modular\ Reactor\ (Image:\ Rolls-Royce)$



Artist's Impression of West Midlands Gigafactory



National Brownfield Institute (Image: University of Wolverhampton)



West Midlands Regional Energy System Operator (RESO) Project (Image: Electron)



MIRA's proposed Hydrogen Technology Hub based on the A5 in Nuneaton









Midlands Green Innovation Network



1. Coordinate green innovation activities across the region and create a platform to showcase examples of green innovation.

Current status: limited cross-region engagement on specific areas of innovation across the region (noting West Midlands Innovation Accelerator programme focused on the West Midlands).

Proposal: Provide a knowledge exchange forum to support green innovation focused organisations and connect them with researchers, funders and other service providers in the region.

- Series of events/activities run by the network
- · Support groups identifying and applying for innovation funding
- Showcase green innovation activities taking place in the region
- Annual Awards event to promote activity

3. Develop an advisory and support programme to enable businesses to pivot and grow in the cleantech sector

Current status: There are a number of programmes in place across the region (with ERDF supported projects ending in 2023), but these tend to be focused on specific areas or technologies. Future Shared Prosperity Fund funding likely to be limited in scale.

Proposal:

- Bring together organisations that can provide support (such as reskilling, manufacturing advice, test facilities, business finance, supply chains) into a regional green innovation offering able to provide support to organisations either establishing or growing in the sector.
- Seek funding for a focused programme around green innovation which can provide tailored acceleration and growth support to high potential businesses active in the region.
- Establish green innovation co-creation spaces to enable collaboration and acceleration of green innovation in the region.











Thank you















Introducing M-GIN

15th December 2022 Faye McAnulla Programme Director, ERA









Introduction to ERA
Overview of M-GIN
The M-GIN Programme









- 1 Introduction to ERA
- 2 Overview of M-GIN
- The M-GIN Programme



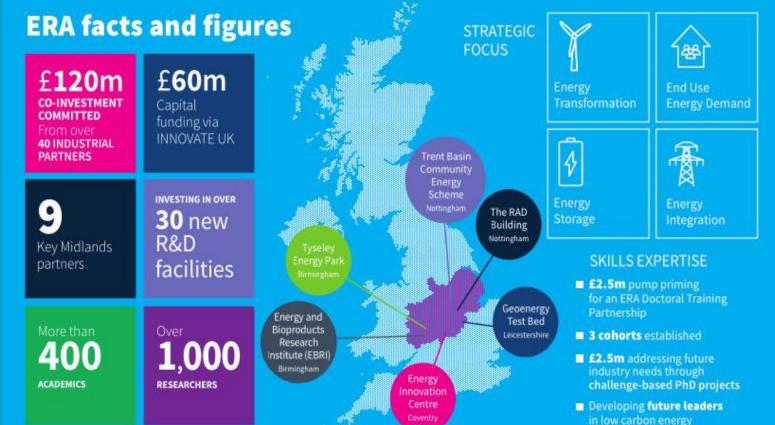






Supported >1000 Midlands SMEs

£60m -> £450m in new investments in energy R&D













































TEN POINT PLAN FOR GREEN GROWTH IN THE MIDLANDS ENGINE

PLACES



GREEN BUILDINGS

Improve energy efficiency and decarbonise heat



NET ZERO TRANSPORT

Lead the transition to reduce emissions



NATURE'S RECOVERY Protected and productive natural assets



ENERGY



LOW CARBON HYDROGEN

Pioneer, commercialise and deliver hydrogen solutions



CLEAN ENERGY

Sustainable energy generation and storage



SMART ENERGY Develop digital infrastructure to decarbonise

ENABLERS



GREEN INNOVATION Green design and making for

economic growth



ENERGY WORKFORCE Highly skilled, inclusive and diverse



GREEN FINANCE Invest and enable to unlock opportunity































Funded by







ERQUANS

AWORGESTER.

BOSCH

centrica

C Inquite sarge SHEMENS





















 Access to large scale demonstrator and test facilities

Regional focus, national impact, internationally networked

- Support for technology development and R&D
- Support for IP development and commercialisation
- Development of hydrogen skills and expertise in businesses
- Civic engagement and policy activities to build understanding
- Development of access to international markets and inward investment



ERA UNIVERSITY PARTNERS











BOSCH



SIEMENS

MANUFACTURING







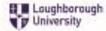


UNSW

INTERNATIONAL ACADEMIC

PARTNERS











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REGIONAL POLICY & SKILLS





HyDEX: Regional Hydrogen Initiatives

• Objective: Develop a set of projects/plans for the region which help build the region's hydrogen capabilities & support emissions reduction, growth & economic development.

- **Rail Demonstrator**
- **Ceramics/Heavy Industry Fuel Switching**
- **Truck and Bus Demonstrator**
- **Refuelling Stations Network**
- **Low-Cost Green Hydrogen Production**

- **R&D** facilities:
- Hydrogen Supply Chain, Vehicle and Fuel **Cell Production**
- **Blending and Distribution**
- **Boiler Manufacturing**
- **Agriculture and Construction** Demonstrator
- **Hydrogen Skills**

Next Steps

- HyDEX will support the development of stakeholder groups with ideally a mix of industrial, academic and local government involvement.
- Opportunity to link these into the activities of HyDEX, ERA and the Midlands Engine.











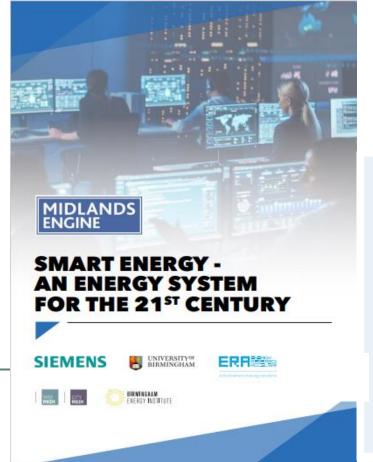








Smart Energy and Twin Cities







- Develop a definition of Smart Energy, or Smart Energy System, which can be applied across the region.
- 2: Identify what Smart Energy Systems are in place in the Midlands Engine Region.
- 3: Explore the challenges related to Smart Energy deployment, including any potential barriers.
- 4: Evaluate the economic impacts of a Smart Energy System.

Midlands Nuclear Review for Midlands Engine



To be released in January. Key recommendations on:

- Midlands Nuclear Forum
- New nuclear generation
- Fusion energy sector
- Nuclear manufacturing sites
- Siting of the UK's long-term Geological Disposal Facility
- Nuclear skills to meet Mids and UK demand.
- Nuclear test, validation and R&D facilities.



- 1 Introduction to ERA
- 2 Overview of M-GIN
- 3 The M-GIN Programme



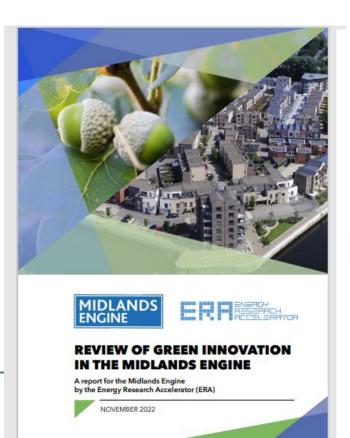


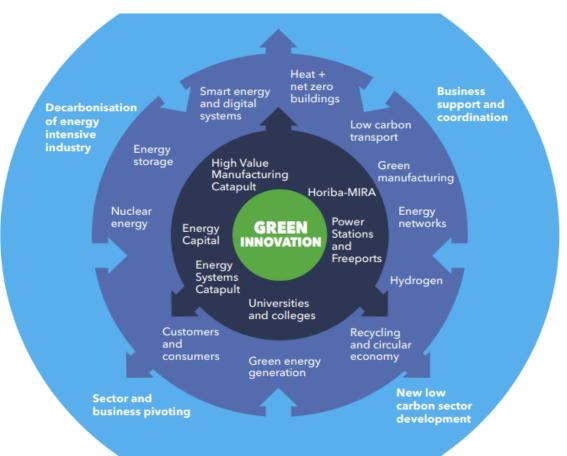




Green Innovation Review







Green Innovation Review



Recommendations

- Coordinate green innovation activities across the region and create a platform to showcase examples of green innovation.
- Establish, and seek funding for, a programme to support energy intensive business to decarbonise and drive down energy costs and increase efficiency.
- 3. Develop an advisory and support programme to enable businesses to pivot and grow in the cleantech sector.
- 4. Support the development of funded region-wide thematic innovation programmes.
- 5. Advocate for new RD&I facilities for the region.
- Support the development of a Net Zero Skills directory, connecting the regional skills, training and degree programmes into a Midlands Net Zero Academy.









Four areas requiring **Innovation Support**

Decarbonisation of energy intensive industry

Low cost energy

Energy storage and energy efficiency

Clustering and symbiosis

Investment capital and finance

Switching from high to low carbon fuels

Business support and coordination

Access to facilities and expertise

Networking and networks

Signposting to support and programmes

Investment capital and finance

Business development programmes

Access to incubators and demonstrators

Sector and business pivoting

Market awareness and minimum

viable product development

Product development support

Test and validation facilities

Training and skills development

chain

Manufacturing Investment capital and support and finance **Business development**

programme

New low carbon sector development

Regional strategy and priorities

all levels

Coordinated skills

development across

Investment prioritisation and support

building

Large OEM lead

Integration into supply

Clustering and coordination

advice

Competitor and regional advantage analysis

Delivery partners



Alignment with Coordination of supply markets - market chain development

Defined standards and verification processes

The Midlands' **Energy Innovation** landscape

High Value Manufacturing Catapult

Manufacturing Warwick Technology Manufacturing

expertise, Group (WMG) SME support programmes

R&D

facilities

Manufacturing

Nuclear AMRC (Derby)

Connected **Places Catapult**

National

the region

organisations

based outside

Nuclear AMRC (HQ in Sheffield

but with R&D

facility in Derby)

Offshore Wind Catapult

(HQ in Glasgow but with O&M

Centre of

Grimbsy)

Excellence at

UKRI, Innovate

UK and EPSRC

Energy Systems Catapult Expertise in energy Support for local

systems and policy

Energy

(ERA)

sector

Research

Accelerator

Horiba-MIRA

Energy Capital

Support for

automotive

Embedded

in WMCA

Freeports:

East Midlands

and Humber

Centre (MTC)

Universities and colleges

Midlands

Enterprise

Projects:

Rugelev

Emerge

Energyfrom-Waste

Development

NZN, RESO,

Universities

authorities and husiness

SME support

programmes

SME support programmes; Energy Launchpad

expertise and

Skills and training

Innovation

centre

Innovation Accelerator

pilot

National Nuclear

Power stations and freeports Ratcliffe:

Test track and

test facilities

West Burton:

Plant

STEP Fusion

Energy

Zones

Innovation

Rugeley:

Focus on

electric

hydrogen and

Rugely

Zero Carbon

Corporation

Tyseley

Energy Park

Drakelow: Energyfrom-Waste

Development

Laboratory

Delivery partners



Sustainability West

Midlands

Midlands Net Zero Hub

Local Enterprise

Partnerships

Other regional innovation-support organisations East Midlands Development

Midlands Connect

National Physical Laboratory

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- 2 Overview of M-GIN
- 3 The M-GIN Programme









Why "Midlands: Green Innovation Network?"



- Support innovation in the region helping with the valley of death
- Act as a central sign-posting and network
- Bring together universities and innovaters
- Support net zero and sustainability
- Support regional economy
- We don't have all the answers (or all the money to deliver!) but bringing people together will get us nearer

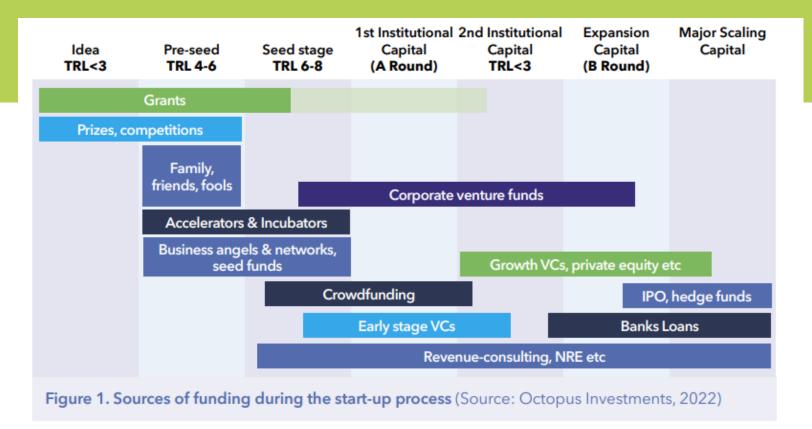


















MIDLANDS GREEN

INNOVATION

NETWORK

Together for net-zero

M-GIN Programme



Topic and details	Venue	
MGIN Launch: Innovate to Thrive! - hear about real-world examples of how businesses can get funding for innovation.	University of Nottingham	
Thinking Outside the Box - how to look at your problems in new ways to find innovative solutions.	Online	
Skills for the Green Economy - what skills are needed by businesses for the new green economy? Opportunity for business to feedback into the Local Skills Improvement Plan.	Derby University	
Protecting Your Ideas - learn from the UK's Intellectual Property Office how you can protect your ideas and technologies.	University of Birmingham	
Sustainable Product Development and Design - how to design sustainable products.	De Montfort University	
	MGIN Launch: Innovate to Thrive! - hear about real-world examples of how businesses can get funding for innovation. Thinking Outside the Box - how to look at your problems in new ways to find innovative solutions. Skills for the Green Economy - what skills are needed by businesses for the new green economy? Opportunity for business to feedback into the Local Skills Improvement Plan. Protecting Your Ideas - learn from the UK's Intellectual Property Office how you can protect your ideas and technologies. Sustainable Product Development and Design	







Contact Us



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https://www.mgin.co.uk

ERA

Twitter: @EnergyRA

Linked In: Energy Research Accelerator

www.era.ac.uk

HyDEX

Twitter: @HyDEXMidlands

Linked in: HyDEX www.HyDEX.ac.uk

Dedicated social channels for MGIN will also launch soon – watch this space!











Thank you















Natalie Gasson-McKinley

Development Manager FSB













Content

- Who are FSB
- FSB's role as Employer Representative Body (ERB)
- LSIP key points
- The LSIP process and final report
- Timescales
- Actions to date
- Keen to contribute?



Who are FSB?

Established over 45 years ago, we are a non-profit making and non-party political organisation that's led by our members, for our members.

Members get an exclusive package of great value business services including advice, financial expertise, support and a powerful voice heard in governments across the UK.

FSB is also the UK's leading business campaigner, focused on delivering change which supports smaller business to grow and succeed. Our lobbying arm starts with the work of our team in Westminster which focuses on UK and English policy issues.

Further to this, our expert teams in Glasgow, Cardiff and Belfast work with governments, elected members and decision-makers in Scotland, Wales and Northern Ireland.



FSB's role as ERB

Role of designated Employer Representative Body (ERB) is to lead development and review of a LSIP for a specific area working with employers, providers and local stakeholders.

FSB will need to:

- Plan the work to develop the LSIP;
- Engage with employers, providers and other stakeholders;
- Convene employers, providers and stakeholders so meaningful discussions can take place;
- Work with a wide range of stakeholders to develop learner demand and employer engagement;
- Work with other ERBs and sector bodies in the local area;
- Produce the LSIP report.



LSIPs will provide an agreed set of actionable priorities that employers, providers and stakeholders in a local area can get behind to drive change. LSIPs will: place employers at the heart of local skills systems, and facilitate direct and dynamic working arrangements between employers and providers.



Employers are at the heart of LSIPs, but other key groups include:

Providers — including Further Education (FE) Colleges, Sixth Form Colleges, Designated Institutions, Independent Training Providers (ITPs) and Higher Education Institutions (HEIs) that deliver Englishfunded post-16 technical education and training in carrying out the duties placed upon them in relation to Skills and Post-16 Education Act 2022.

Stakeholders — including mayoral combined authorities (MCAs), the Greater London Authority (GLA), local enterprise partnerships (LEPs) and local authorities (LAs).



- LSIPs set out the key priorities and changes needed in a local area to make technical education or training more responsive and closely aligned to local labour market needs.
- LSIPs will provide an agreed set of actionable priorities that employers, provides and stakeholders in a local area can get behind.
- Agreed priorities will be informed by evidence of unmet and future skills needs.
- LSIPs should focus on key challenges and priorities.



- Priorities should look up to three years ahead.
- Duties in respect to LSIPs have been placed upon specific providers that deliver English-funded post-16 technical education or training.
 Applies to Sixth Form Colleges where they deliver post-16 technical education for example T-Levels and BTECs;
- The LSIP should describe how skills, capabilities and expertise required in relation to jobs that directly contribute to or indirectly support Net Zero



Process

Stage A – Articulating employers skills needs; what skills employers need locally but struggle to find? Stage B – Translating employer needs into changes in provision; how can those needs best be met by providers?

Stage C – Addressing learner demand and employer engagement.

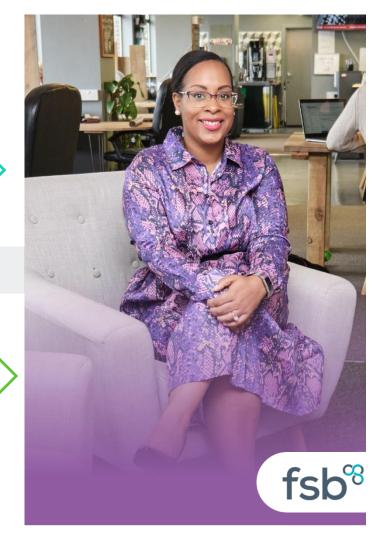
Structure of report

LSIP priorities

Taking the LSIP priorities forward

Delivering the LSIP priorities

Annex: Background and methodology



Accountability Agreements

Stage C – Addressing learner demand and employer engagement: Developing the demand on the learner side through CEIAG, MCA/GLA, LEP Jobcentre Plus and employers' offers.

LSIP report:

Part 1: L LSIP priorities
Part 2: Taking forward the LSIP
priorities
Part 3: Delivering the LSIP priorities

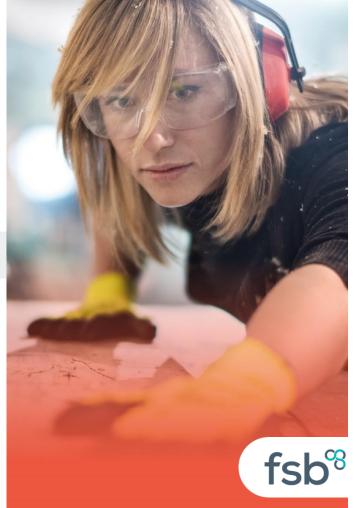
Annexes: Local Strategic context and background, method and links with wider economic strategies 2023 LSIP only – need to use draft priorities to feed into LSIF and Accountability Agreements

> Feed into Accountability Agreement, other provider plans and MCA/GLA plans



Timescales

Phase	Time period	Key points
Induction / Background	August to September 2022	Meetings with DfE Area and Territorial Leads
Preparation for project	August to October 2022	Draft stakeholder engagement agreements, terms and conditions
		Submit project plan and application for funding, deadline Monday 3 October
Research and delivery	September 2022 to February 2023	Evidence gathering and engagement with employers, providers and wider stakeholders
		Co-create with providers set of actionable priorities
		Six weekly progress reports to DfE
Write-up	March 2023 to April 2023	Draft report with engagement from stakeholders and providers
Evaluation / Finalise report	May 2023	Submit reports to Secretary of State (SoS) at end of May



Actions to date

- Meetings with Department for Education (DfE), ERBS, employers and providers.
- Early thinking and risk assessments around some of the key challenges e.g. size of the area; opportunities e.g. legacy – long term benefits beyond year three; and considerations e.g. MCCA devolved adult education budgets.
- Discussions with D2N2 LEP on available data, joining up with D2N2's People and Skills Board and B6 Group.
- Meeting with MCCA representatives.
- Stakeholder mapping to identify key contributors to overarching LSIP
 Steering Group. Three meetings have now taken place.
- Data collection: what analysis and evidence is already out there? For example, D2N2 Skills Report (January 2022).
- Critical path and key dates noted.



Scope

In defining the scope of the LSIP, ERBs need to be clear about where they can add most value. For example, drawing on existing data and analysis, building on and joining up with **specific sectoral skills initiatives** and filling gaps by amplifying the voice of those employers or sectors that **most struggle to be heard.** They may also provide a coherent articulation of cross-cutting issues such as low carbon, digitalisation and essential and transferable **skills** affecting businesses in all sectors. This will help ensure LSIPs support a broader range of businesses, while avoiding asking ERBs to do the impossible task of trying to cover everything.



Scope

Phase one

Focus on cross cutting issues.

Phase two

Understanding cross cutting issues across place, to better understand place based synergies and differences.



Keen to contribute?

- Flag or share key reports that will help shape our thinking.
- Indicate if you would be interested in participating online surveys and telephone consultations.
- Indicate if you can help expand our employer reach.
- Attend one of our focus groups in the New Year.



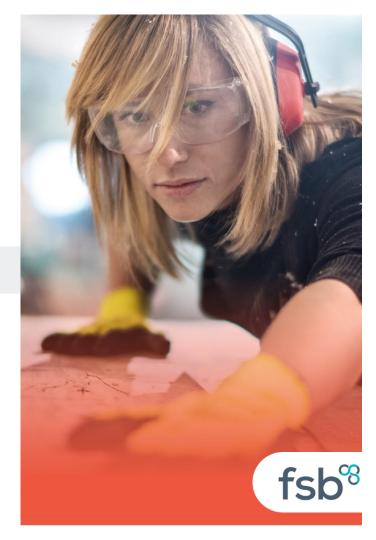
Online Focus Groups

Employer Online Focus Groups

- Tuesday 10 January, 1.00pm 2.30pm
- Wednesday 11 January, 5.00pm 6.30pm
- Thursday 12 January, 1.00pm 2.30pm

Providers and Stakeholder Focus Groups

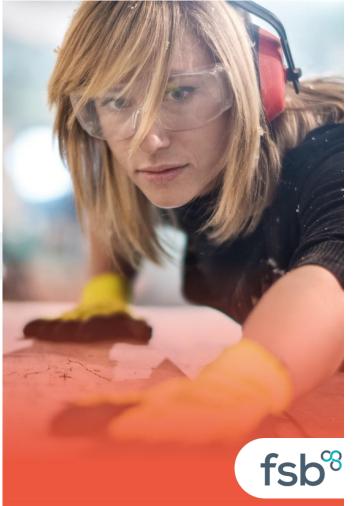
• Friday 13 January, 9.00am – 10.30am



In-Person Focus Groups

In-person for Employers, Providers and Stakeholders

- Wednesday 25 January, 9.30am 11.30am, Derby County
 Football Club
- Thursday 26 January, 9.30am 11.30am, Casa Hotel,
 Chesterfield
- Thursday 26 January, 1.00pm 3.00pm, Mansfield
 Innovation Centre



Thank you.

Natalie Gasson-McKinley
FSB Development Manager,
Nottinghamshire and Derbyshire

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Delivery partners







Paul Yeomans

Knowledge Transfer
Partnerships Manager,
University of Nottingham



Delivery partners











Innovate to survive

Paul Yeomans



Gerhardt
International A/S
was founded in
1954 in
Copenhagen

Manufacturers of cutting dies to the printing industry.

Rolls Royce Annual R&D Spend £1.2b (2021)

AZ R&D Spend £5b (2021)

Pfizer R&D Spend \$13.8B Apple R&D Spend \$26.25b





- £25billion settlement in latest spending review.
- (£8b per year)
- £25m per year for KTP (Rising in 23/24/25)







Green Buildings





Nature's Recovery



Energy Workforce



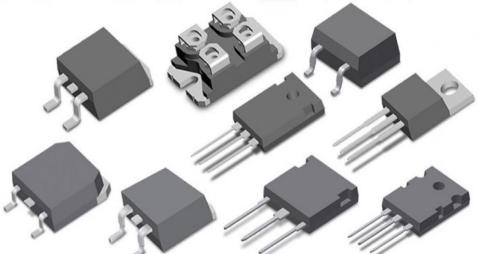
Blue-Green Places



Clean Energy







Net Zero Transport









ktp@nottingham.ac.uk



Q&A

Delivery partners









Delivery partners





