### **Public Document Pack**



Wednesday, 10 May 2023

To: Members of the MCA - Local Enterprise Partnership and Appropriate Officers

### **NOTICE OF MEETING**

You are hereby invited to a meeting of the South Yorkshire Local Enterprise Partnership to be held at **South Yorkshire MCA**, **11 Broad Street West**, **Sheffield**, **S1 2BQ**, on: **Thursday**, **18 May 2023** at **11.00 am** for the purpose of transacting the business set out in the agenda.

Martin Swales

Maty Swarey

**Chief Executive and Head of Paid Service** 

### **Member Distribution**

Richard Stubbs (Chair) Private Sector LEP Board Member Neil MacDonald (Vice-Chair) Private Sector LEP Board Member

Mayor Oliver Coppard South Yorkshire Mayoral Combined Authority

Bill Adams TUC Representative

Angela Foulkes Private Sector LEP Board Member

Louisa Harrison-Walker Sheffield Chambers
Councillor Sir Steve Houghton CBE Barnsley MBC

Mayor Ros Jones CBE City of Doncaster Council

Peter Kennan Private Sector LEP Board Member

Professor Kevin Kerrigan Sheffield Hallam University - LEP Member

Professor Koen Lamberts Private Sector LEP Board Member

Councillor Chris Read Rotherham MBC

Gemma Smith Private Sector LEP Board Member

Professor Chris Wigginton Sheffield Hallam University (Reserve)

### **MCA - Local Enterprise Partnership**

Thursday, 18 May 2023 at 11.00 am

Venue: South Yorkshire MCA, 11 Broad

Street West, Sheffield, S1 2BQ



### **Agenda**

Agenda Ref No	Subject	Lead	Page			
Introduction						
1.	Welcome and Apologies	Chair				
2.	Declarations of Interest	Chair				
	<ul> <li>In relation to any agenda item</li> <li>In relation to any activity since the last formal meeting</li> <li>In relation to any forthcoming activity</li> </ul>					
3.	Notes of Last Meeting and Action Log	Chair	5 - 14			
4.	The South Yorkshire Economy: Northern Powerhouse Independent Economic Review	Felix Kumi- Ampofo	Verbal			
	Strategic Insights		1			
5.	Minister & Key Stakeholder Engagement	Molly Axelby	15 - 18			
6.	Vertical Farming using Mine Water Geothermals	Professor Martin Howarth (Sheffield Hallam University)	Verbal			
7.	South Yorkshire Advanced Manufacturing Capabilities - HVMC Research Report Output	Chris Young (High Value Manufacturing Catapult)	19 - 48			
	Updates					
8.	Investment Zone Development	Andy Gates	Verbal			
9.	MCA & LEP Policy and Programmes Update	Philip Cooper	49 - 54			
10.	MCA Governance Update	Martin Swales	Verbal			
11.	Forward Plan	Chair	55 - 58			

Date of next meeting: Thursday, 13 July 2023 at 11.00 am

At: South Yorkshire MCA, 11 Broad Street West, Sheffield, S1 2BQ

### MCA - LOCAL ENTERPRISE PARTNERSHIP

### **MINUTES OF THE MEETING HELD ON:**

THURSDAY, 9 MARCH 2023 AT 11.00 AM

VIRTUAL MEETING



### PRESENT:

Richard Stubbs (Chair)

Neil MacDonald (Vice-Chair)

Mayor Oliver Coppard

Private Sector LEP Board Member
Private Sector LEP Board Member
South Yorkshire Mayoral Combined

**Authority** 

Councillor Sir Steve Houghton CBE Barnsley MBC

Mayor Ros Jones CBE City of Doncaster Council

Peter Kennan Private Sector LEP Board Member

Professor Kevin Kerrigan Sheffield Hallam University

Professor Koen Lamberts

Gemma Smith

Private Sector LEP Board Member

Private Sector LEP Board Member

### **OFFICERS IN ATTENDANCE:**

Sarah Norman Chief Executive, Barnsley MBC Barnsley MBC

Martin Swales Chief Executive and Head of SYMCA Executive Team

**Paid Services** 

Tom Bousfield Corporate Director Growth, SYMCA Executive Team

**Business & Skills** 

John Dowie Executive Director of SYMCA Executive Team

Infrastructure and Place

Andy Gates Assistant Director - External SYMCA Executive Team

**Affairs** 

Adam Greenwood Assistant Director Employment & SYMCA Executive Team

Skills

Laurie Heykoop Senior Economic Policy

Manager

Felix Kumi-Ampofo Director of Corporate Policy SYMCA Executive Team Nici Pickering Strategic Marketing Manager SYMCA Executive Team Steven Pleasant Healthy Life Expectancy Lead SYMCA Executive Team

Sarah Pugh (Minute Taker)

### **GUESTS IN ATTENDANCE**

Professor Alan Walker University of Sheffield

**APOLOGIES:** 

Bill Adams TUC Representative

### Angela Foulkes

Councillor Terry Fox Louisa Harrison-Walker Councillor Chris Read Councillor Julie Grocutt Damian Allen Kate Josephs Sharon Kemp Private Sector LEP Board Member Sheffield City Council Sheffield Chambers Rotherham MBC Sheffield City Council City of Doncaster Council Sheffield City Council Rotherham MBC

### 72 Welcome and Apologies

The Chair welcomed attendees to the meeting.

Apologies were noted as above.

### 73 **Declarations of Interest**

As representatives of skills providers in the region, Professor Kevin Kerrigan and Professor Koen Lamberts both declared an interest in item 6, Skills Strategy Development.

### 74 Notes of Last Meeting and Action Log

**RESOLVED:** That the notes of the meeting held on 12<sup>th</sup> January 2023 be agreed as a true record.

**RESOLVED:** to note updates to the action log.

### 75 The South Yorkshire Economy - Presentation

A presentation on the South Yorkshire Economy was given which highlighted the following:

- Inflation was still high, but was steadily declining, and forecast to be at 3% by the end of the year,
- Interest rates were also still high, and were forecast to remain high but stop rising in 2023,
- The economic growth is flat, but was forecast to improve in 2024,
- Economic inactivity was at 8.5 million people, and the post-Covid increase was mainly driven by long term sickness, and is especially prevalent in households over the age of 50 and in low wealth households.
- Unemployment claimant rates had fallen since the pandemic, and were now almost returned to the pre-pandemic level, following the national average.
- The cost of energy was forecast to return to competitive market operation by the second half of 2023.

Specifically, regarding the local region it was noted that:

• Surveys of businesses had shown that most were expecting their

workforces to grow in the coming year,

- The greatest concerns for businesses at this time was costs increasing,
- High interest rates will be increasingly felt by businesses over coming months and years as arranged debt is renewed.

It was asked how many businesses in the region had made use of the superdeduction capital allowance. **ACTION: Senior Economic Policy Manager -** A response was given that this information wasn't currently known, but would be looked in to.

**RESOLVED:** To note the update.

# National Policy Environment and Government Engagement: South Yorkshire Approach

An update was presented of the National Policy Environment and Government Engagement with South Yorkshire. It noted in particular the creation of 3 new Government departments: the Department for Energy Security and Net Zero, Department for Science, Innovation and Technology, and Department for Business and Trade.

Policy changes in the March budget were expected to be:

- Extension of powers for 'devolution trailblazers' Greater Manchester and West Midlands, with new powers being announced, as well as existing devolved powers being extended,
- Focus on research and development as a driver of economic growth. It
  was noted that there are a number of assets in South Yorkshire which
  align with this priority,
- The possible announcement of Investment Zones, which the MCA was prepared to respond to quickly.

A discussion was had on Treasury clawback of investment in railways, and the subsequent impact on South Yorkshire, in particular cuts to services.

The Chair requested that with changes to government departments, the MCA's stakeholder engagement catalogue be reviewed. **ACTION: Assistant Director External Affairs –** to bring a more detailed approach to this at a future meeting.

**RESOLVED:** To note the update.

### 77 Skills Strategy Development

An update report on the development of the SYMCA Skills Strategy was presented. It noted that:

- KADA Consultancy had completed a series of workshops with stakeholders, and work was now underway to identify key opportunities, gaps and risks which need addressing in the strategy,
  - The issues identified in this work would then be tested with relevant groups such as the Regional Skills Advisory Board, colleges and training providers, and employers,
  - The final strategy would establish a set of shared priorities for the region,

a detailed outcomes framework and an implementation plan.

Key sectors to target had been identified as:

- Digital skills,
- Green skills,
- · Cultural and creative sectors,
- Health and social care.

The discussions and the available evidence base had been developed into five broad themes:

- A strong start for a secure future,
- Lifelong learning and creating a resilient and inclusive workforce/communities,
- Changing futures,
- The place for innovation and enterprise,
- A connected and responsive system.

The Board discussed key elements which should also be addressed in the strategy, including the deployment of Apprenticeship Levy funding, an innovation and higher technical skills pipeline and the unequal distribution of skills provision for older age groups.

**ACTION: Assistant Director Employment & Skills** - to present a draft of the strategy to the LEP Board before it is agreed by the MCA.

**RESOLVED:** To note the update.

### 78 **UKREiiF Update**

A report on attendance at the UK Real Estate Investment & Infrastructure Forum (UKREIIF) was presented. It noted that:

- The UKREiiF event would be an opportunity to refresh and relaunch the proposition for the region,
- A steering group had been formed and was meeting regularly to develop a programme of engagement from the MCA alongside Local Authorities and local partners,
- There was high demand for a programme of activity as part of the main event, but also at the South Yorkshire stand space and at fringe venues,
- The online investible opportunities portfolio was undergoing updates to reflect current portfolio opportunities.

Board members emphasised the need for a clear and consistent brand and message from South Yorkshire at the event.

**RESOLVED:** To note the update.

### 79 Integrated Care Partnership: Expert Panel Update

An update report was presented on the Integrated Care Partnership, and the formation of an Expert Panel. It noted the prevalence of lower life expectancy and high health inequalities in the region, and the Mayor's manifesto commitment to making South Yorkshire the healthiest region in the country.

It was noted that healthy life expectancy is linked to many other areas of the MCA's work, including skills provision and bolstering the well-respected health, wellbeing and Med Tech industries in the region.

Professor Alan Walker, Co-Director of the University of Sheffield Healthy Lifespan Institute and Chair of the Task and Finish Group established to deliver this work, also noted that:

- The task and finish group would have a short lifespan, focussed on reviewing existing research and evidence of health outcomes in the region, identifying key opportunities, and producing an plan of medium and long term actions,
- The Health Advisory Action Panel would comprise Directors of Public Health, academic partners, and partners across the business and voluntary sectors,
- The ageing population in South Yorkshire meant that increasing life expectancy would be key to meeting the needs of the labour market.

Board members expressed their support for this work, but also expressed caution about the scale of the issue seeking to be tackled, and the need to therefore engage many workstreams and partners.

**RESOLVED:** To note the update.

### 80 MCA and LEP: Policy and Programmes Update

An update was provided on ongoing MCA and LEP Policy and Programmes, noting in particular:

- The appointment of Ed Clancy as the new Active Travel Commissioner,
- Approval of £6m funding for the new National Centre for Child Health Technology (NCCHT),
- The Convention of the North event in January.

**RESOLVED:** To note the update.

### 81 Forward Plan

A Forward Plan for future meetings of the Board was presented.

**RESOLVED:** To note the Forward Plan.

I, the undersigned, confirm that this is a true and accurate record of the meeting.
Signed
Name
Position
Date



# \_

### **Local Enterprise Partnership**

## **Action Log from 12 January 2023**



### **Open and Recently Completed Actions**

Meeting Date	Minute No	Action	Action Owner	Update	Status
12/01/23	65	The South Yorkshire Economy – Presentation	Felix Kumi- Ampofo	Initial engagement has taken place but more work is needed. This will now be considered as part of a wider	Ongoing
		Minute:  ACTION – Policy Team to conduct a review of evidence on successful early years intervention methods, in collaboration with Barnsley MBC.		exploration of the Early Years policy priority area. Broader engagement and research is needed to confirm how the MCA and partners can address the key issues.	
09/03/23	75	The South Yorkshire Economy – Presentation	Laurie Heykoop		Ongoing
		Minute:  It was asked how many businesses in the region had made use of the superdeduction capital allowance. ACTION:  Senior Economic Policy Manager - A response was given that this information wasn't currently known, but would be looked in to			

Meeting Date	Minute No	Action	Action Owner	Update	Status
09/03/23	76	National Policy Environment and Government Engagement: South Yorkshire Approach	Andy Gates	Item covering this included in the 18 <sup>th</sup> May meeting agenda.	Closed
		Minute:			
		The Chair requested that with changes to government departments, the MCA's stakeholder engagement catalogue be reviewed. <b>ACTION: Assistant Director External Affairs –</b> to bring a more detailed approach to this at a future meeting.			
09/03/23	77	Skills Strategy Development  Minute:	Adam Greenwood	Update on progression of strategy attached.	Ongoing
		ACTION: Assistant Director Employment & Skills - to present a draft of the strategy to the LEP Board before it is agreed by the MCA.			



### Thursday, 18 May 2023

### **Skills Strategy Update**

#### 1. Introduction

In February 2022 the Education, Skills and Employability Board commissioned the development of a strategy for Education, Skills and Employability in South Yorkshire. The Board also acknowledged that development of the strategy must take account of developments in the wider education, skills and employability landscape that impact on delivery or that create new opportunities for residents and employers across South Yorkshire, in particular, the Local Skills Improvement Plan being led by the Chambers of Commerce.

This paper seeks to update LEP members on the development of the strategy following the presentation to the LEP Board in March 2023.

### 2. The issue and connection to delivering on our economic objectives:

As a region across all levels of formal education we fall behind the national averages, blighting attainment and progression. Our workforce is characterised by a profile of low skills which matches the available jobs. We have to address the long-term systemic skills problems that hold South Yorkshire residents back from fulfilling their potential. That means a change in our methodology to a longer-term approach working in close partnership with our Local Authorities, colleges, training providers and other partners.

The evidence base of the strategy is the foundation to inform future planning, create opportunities and maximise the potential for employees, employers, and the economy. The evidence base started from a strong position, thanks to recent skills research, including more detailed labour market intelligence from the Skills Advisory Network and the Local Skills Improvement Plans, which provides further insight into the demand for skills from employers and the necessary steer for the region's current and future employment trends and skills demands.

A strategy for skills will allow us to set short- and longer-term priorities and actions in the context of the wider ambitions for economic growth as set out in the Strategic Economic Plan and our commitment to a stronger, greener and fairer future. The scope includes sector, geography, demographic, skill need and demand, and we are making this information accessible to those who need it.

Forecasting based on this labour market information provides a basis for determining the region's key business sectors that can contribute to meeting the economic challenge outlined in the SEP. For example:

- Understanding the future training demands is vital for industries/sectors which are identified as being able to provide the highest economic return for the region based on innovation.
- Identifying growth industries requiring additional capacity for employers of large numbers of people which can provide employment opportunities in the region.
- Sectors which are of important strategic value on a sub-regional basis.
- Inclusive growth and how the employer skills demand can be met by those with greatest need. The role of employers, training providers and 3<sup>rd</sup> Sector etc in levelling up, not just trickling down.

### 3. What are we doing in South Yorkshire already - and what could we do?

The work on the development of the Skills Strategy is supported by the Regional Skills Advisory Board. Feedback from the Board has identified that there is significant ongoing work in the skills space and related agendas that adds complexity to the development of a strategy. Therefore, a draft of the skills strategy is not yet available.

The process for producing the skills strategy has included a consultation phase consisting of a series of workshops targeting different aspects of the skills landscape in South Yorkshire has concluded. Including direction from the Mayoral manifesto, the Regional Skills Advisory Board and Local Authority strategies which has helped to develop a broad range of perspectives to inform the development.

The Local Skills Improvement Plan and the digital skills targeted phase 2 of the LSIP will form an integral component part of the strategy; highlighting some of the present and future employer skills needs in the region with the expected release of the final version by June 2023.

### 4. Next Steps

The focus is currently to consolidate the research and evidence base, which will not only direct the skills priorities of the region but become the cornerstone for growth plans and inform the future of further devolution activity such as Investment Zones within South Yorkshire



### Thursday, 18 May 2023

### Ministerial & Key Stakeholder engagement

Is the paper exempt from the press and public? No

Reason why exempt: Not applicable

Purpose of this report: Discussion

Strategic Priority Cross Cutting

### **Director Approving Submission of the Report:**

Clare Monaghan, Executive Director of Policy and Strategic Development

### Report Author(s):

Andrew Gates – Assistant Director External Affairs Andrew.gates@southyorkshire-ca.gov.uk

Molly Axelby – Corporate Policy and Strategy Officer Molly.axelby@southyorkshire-ca.gov.uk

### **Recommendations:**

That LEP Board note the ministerial and key stakeholder engagement activity undertaken by the MCA and provide reflections on the implications and opportunities for South Yorkshire.

### 1. Introduction

This paper provides an update on the ministerial and key stakeholder engagement activity undertaken by the MCA, and invites feedback and discussion on these key areas.

### 2. Background

To achieve transformative and sustainable change in South Yorkshire, we must have effective relationships and partnerships with Government and key stakeholders. They provide opportunities for collaboration and funding that enable South Yorkshire to deliver on our economic objectives.

This report provides detail of engagement activity across the breadth of the MCA - including Economic Growth, Business, Trade & Investment, Skills & Education, Housing & Infrastructure, Transport, Health and Cultural & Creative Industries.

The emerging priorities of the Mayor and the organisation are supporting the development of a consistently positive narrative that will enable a more proactive stakeholder engagement approach, rather than one that is reactive in respect to external priorities and timelines.

### 3. What that means for South Yorkshire

### Economic Growth, Business, Trade & Investment

At the Spring Budget, it was announced that South Yorkshire has been chosen to work with Government to design an Investment Zone in the region. This is a result of months of engagement with Government from SYMCA and our Local Authorities to demonstrate our capacity, capability and ambition for the region. We have also worked alongside the M10 to shape and influence Investment Zone policy to ensure a more practicable process and model. Our Chief Executive, alongside his counterparts in our Local Authorities, has also engaged with Director Generals across the Department for Levelling Up, Housing and Communities (DLUHC) and His Majesty's Treasury (HMT) to make the case for South Yorkshire.

Similarly, our Local Authorities have also been successfully engaging with Government to secure funding and partnerships.

- The Levelling Up Minister, Dehenna Davison, recently visited Barnsley, due to their successful £10.2m Levelling Up bid for Barnsley Futures.
- City of Doncaster Council have also secured a 'Levelling Up Partnership' with Government, which will trial a different way of collaborative working between Whitehall and Local Authorities to develop a deep understanding of interlinked issues affecting a 'place'. This will provide important and valuable lessons for the wider region.
- Rotherham Council were awarded funding for their third Levelling Up Fund bid in the Spring Budget, marking a clean sweep of 3/3 successful bids. They have also hosted visits from senior DLUHC officials in the past few months.
- Sheffield City Council continue to work closely with Whitehall officials on regeneration opportunities through the Brownfield Housing Fund project

The Mayor has held multiple meetings with the Investment Minister to champion the huge potential of South Yorkshire and share our ambition to unlock greater investment for the region. Officers are now working with the Office for Investment and the Northern Powerhouse team in the Department of Business and Trade on a pipeline of investable propositions. Likewise, officers are meeting with UK Research and Innovation (UKRI) to explore the potential of developing a place-based investment plan for the region. Conversations are also taking place with institutional investment firms to discuss collaboration opportunities and make the case for greater investment in the region.

SYMCA are highly supportive of the appointment of Andy Haldane to Chair the Industrial Board at University of Sheffield Advanced Manufacturing Research Centre (AMRC) for the next three years. Mr Haldane brings a wealth of experience which was demonstrated in his engagement at our Economic Summit in March 2022 and is a huge gain for the region.

### **Skills & Education**

The Mayor has attended a number of events to promote the great work taking place across the region to raise our educational attainment rate and promote our skills offer. Some examples include speaking alongside MP Ed Miliband at the launch of the Rotherham Skills Academy Domestic Retrofit programme, which is funded through our Adult Education Budget, and

engaging with school children through a Q&A session at the South Yorkshire Schools' Climate Conference 2023

In June, Sheffield will be hosting the Northern Powerhouse Education, Employment and Skills Summit 2023 which has a stellar line up of speakers including; The Rt Hon Gillian Keegan MP, Secretary of State for Education, Lord David Blunkett, Former Secretary of State for Education, Lord Jim O'Neil, Vice-Chair, Northern Powerhouse Partnership and Lord Bob Kerslake, Chair, UK2070 Commission. This will provide an opportunity to showcase the region and underline the contribution South Yorkshire can make to unlocking the North's potential.

### **Transport**

The Mayor has continued to lobby Government on the pressing Transport issues facing the region. On bus, he has been vocal on the need for a sustainable funding settlement and certainty on short-term funding, and held meetings with the Minister for Local Transport, Richard Holden, to press this case. On rail, he has continued to work with the other Northern Mayors to stand up for the passengers of the North in the face of continued underperformance from TransPennine Express. He has also met with the Minister for Rail, Huw Merriman, on more broad South Yorkshire specific rail issues.

The new Active Travel Commissioner has had a packed schedule of engagements to meet stakeholders in his first few months, including with academics, local skateboarding, cycling and walking groups and schools, among many others. He has also met with the Greater Manchester Active Travel Commissioner and her team to discuss best practice and potential areas of collaboration, as well as jointly writing to the Chancellor, with the Mayor, to raise concerns about national active travel funding reductions.

### Health

On this emergent policy area broad engagement has taken place to explore the potential role of the MCA, led by the Mayor, including in his capacity as ICP Chair, and the Healthy Life Expectancy Adviser. This has included conversations with Sir Michael Marmot, DHSC, OHID, to determine the scope of problems facing the region.

The renewal of funding for Working Win represents a huge success of private and public engagement of Ministers, and officials, for a highly successful local programme. It also exemplifies a broader point that programmes designed at a regional level, to address local needs and issues, can deliver much more effective outcomes then they might when ran at a national level. Additionally, emerging conversations have begun between the MCA and Department for Work and Pensions (DWP) on closer working to address the links between work and health.

Further work has taken place through the Bloomberg Harvard Leadership Programme which has brought together eight systems leaders from across the region to deep dive into early years interventions to support improvement in healthy life expectancy.

### **Cultural & Creative Industries**

The Mayor has recently convened a number of events related to the cultural and creative industries to deepen his understanding of the needs of the sector. He hosted 'Creative South Yorkshire' breakfast networking event in March for regional stakeholders and a roundtable discussion co-hosted with Creative UK in April. Discussions have commenced on the Mayor's

manifesto commitment to establish a South Yorkshire Cultural Forum, while relationships with national funders such as Arts Council England continue to mature with engagement led by the Arts, Culture and Heritage Project Director. This is complimented by ongoing sustained effort from our Local Authorities to strengthen relationships with national funders, noting the recent specification of Barnsley and Rotherham as Arts' Council 'Priority Places' and associated significant uplifts in funding allocations.

### 4. Discussion points

- Any additional insights on the national policy environment have we captured everything of interest?
- Any feedback, advice or direction on activity of the MCA in response to the national policy environment?
- Any further detail required on MCA activities?
- Are there any policy areas LEP Board Members would welcome deeper discussions on?

### 5. Next Steps

This paper will be a standing item as requested at the previous LEP Board meeting.

### **Background Papers**

07. National Policy Environment and Government Engagement South Yorkshire Approach 12 01 23



### Thursday, 18 May 2023

# South Yorkshire Advanced Manufacturing Capabilities HVMC Research Report Output

Is the paper exempt from the press and No

public?

Reason why exempt: Not applicable

Purpose of this report: Discussion

Strategic Priority Business, Recovery and Growth

### **Director Approving Submission of the Report:**

Martin Swales, Chief Executive and Head of Paid Service.

### Report Author(s):

Chris Young

Technology Portfolio Manager, High Value Manufacturing Catapult

### **Recommendations:**

Members are asked to note the accompanying slide pack.

### **List of Appendices Included:**

A South Yorkshire Advanced Manufacturing Capabilities - HVMC Research Report Output Slides





# Innovation District Workshop - Capabilities

















# **Capabilities Review – Key Questions**



1) What are the distinctive advanced manufacturing capabilities of South Yorkshire that differentiate it nationally and internationally?

What are the future market opportunities in advanced manufacturing and potential market share for the region?

3) What types of interventions are required for the region to seize these opportunities and realise their impact on economic growth?



# Introduction

















### Introduction - The HVMC Team







Professor Sam Turner CTO @ HVMC Editor



Chris Young
Technology Portfolio Manager
Project Manager



Abishek Ramesh Technology Strategy Manager Lead Author



Keith Wilson Economist Economic Analysis



Jason Dawes Senior Technology Officer Author



Usama Attia Technology Manager Author

In partnership with:





### Introduction – Contributors



#### 1-2-1 Interviewees

























CASTINGS

TECHNOLOGY

































































### Survey Respondents

Agemaspark Ltd

A R Wentworth I td A. Wright & Son Ltd Aalberts IPS Abbey Forged Products Ltd Accurate Laser Cutting (SJS) Limited

Air Accessories (Sheffield) Ltd Bridon Bekaert Ropes Group (Bridon International Ltd in UK) Chesterfield Poultry Clyde Pneumatic Conveying Ltd **DN4 Innovation Management Ltd Dual Inventive Ltd** Edward Turner and Son Ltd **Erodatools Ltd** Euroweld Technologies UK Ltd Fernite of Sheffield Ltd. Forged Solutions Group Globetrace Limited Kiveton Park Steel laser web Itd

MAN Hydraulics & Engineering Limited

McCallum Manufacturing Ltd Mechtronic Industries Ltd. Medezine Ltd Nordic Energy Ltd Performance Engineered Solutions (PES) Ltd **PGM Technologies Ltd** Project Display Ltd QSSLTD.COM

R Anson & Son Sheffield Precision Medical Ltd Simpson Pattern Ltd Techni Measure **Technicut Limited** Tecoglas Itd The Boeing Company The Rack Group Ltd W. Hallam Castings Limited We Do 3D Printing Wellhouse Leisure WINTWIRE LTD

# Introduction – Inputs



### Previous assessments:

- Sheffield City Region: Sector Specialisms
- Mapping Local Comparative Advantages in Innovation
- Making it: The Advanced Manufacturing Economy in Sheffield and Rotherham
- The UK in 230 Key Trends for Manufacturing
- An Advanced Manufacturing Innovation District for Sheffield and Rotherham: Evidence Base & Recommendations
- An Economic Devolution Deal for Sheffield City Region
- Preparing for the Northern Powerhouse: Smart Specialisation & the Sheffield City Region
- Driving productivity growth through innovation in high value manufacturing
- Towards a Global Innovation Corridor Strategy and Policy Support: The Evidence and Insight Report
- Supply chain mapping report: High value manufacturing ir Sheffield City Region
- GIID Packet 1 & Packet 2
- Strategic Economic Plan
- Maximising Inward Investment Opportunities through the University of Sheffield's Innovation Assets
- South Yorkshire Mayoral Combined Authority Benchmarking
- Economic Complexity in South Yorkshire
- SY Health and Wellbeing sector study by KADA

Industry megatrends & Tacit Knowledge

# Face-to Face interviews:

- Businesses
- Academic Institutions
- RTO:
- Local authorities
- National bodies
- Central government

# Parallel workstreams:

- Skills, Training & Business Support
- Spatial Vison & Strategy
- Branding & Communications

### **Online Survey**

- LargeCompanies
- SMEs
- Across four local authorities

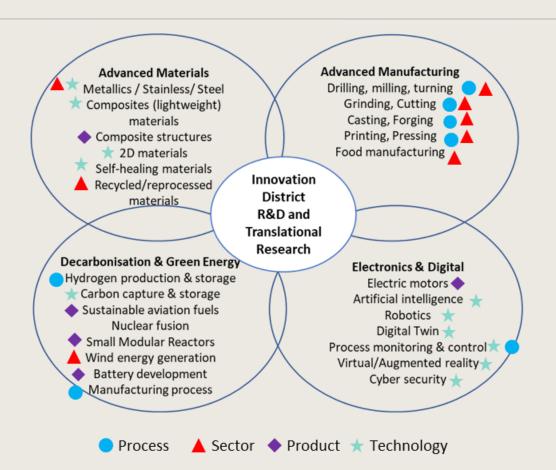
### **Public Policies**

- UK R&D Roadmap
- Ten Point Plan for a Green Industrial Revolution
- IUK: Building the Future Economy
- Net Zero Strategy
- UK Net Zero R&I Framework
- UK Innovation Strategy
- Levelling Up White Paper
- Science & Technology Framework

Site Visits

# **Initial Advanced manufacturing definition**





- Original definition
- Overly complex
- Too generic
- Not comprehensive



# South Yorkshire Differentiators in Advanced Manufacturing

















### **AMID differentiators**





### **Capabilities**

Strength

Page



- Metal fabrication processes (machining, casting, forging etc.)
- Robotics, automation and control systems
- Design, Modelling and Simulation
- Joining technologies
- Additive mfg. / 3D printing
- Digital, AI & Data for Health-Tech
- Genomics/Gene therapies



### Sectors



- Steel
- Aerospace
- Automotive
  - Defence
- Power and Energy
- Nuclear
- Life sciences & health tech
- Food & drink



### Major R&I assets

- University of Sheffield
- Sheffield Hallam University
- Adv. Manufacturing Park (AMP)
- Advanced Manufacturing Research Centre (AMRC)
- Advanced Wellbeing Research Centre (AWRC)
- National Centre of Excellence for Food Engineering (NCEFE)
- Nuclear Adv. Manufacturing Research Centre (NAMRC)

The University of Sheffield Energy Institute

Gene Therapy Innovation and Manufacturing Centre (GTIMC)

UKAEA Fusion Technology Facility

The Translational Energy Research Centre (TERC)

National Centre for Sports and Exercise Medicine's (NCSEM)

# Enablers

### **Supportive workforce and skills Pipeline**

- ~60,000 employees in mfg. Sectors.
- · Circa 10,000 graduates and apprentices each year completing courses in complementary subject areas.
- 1,234 researchers in the field and 96% research internally recognised or better in target sectors.

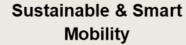
### Global reach & supply chain:

- 14 OEMs/Tier 1 companies who are global players in target sectors and competences.
- · All are research active in the region and are in sectors which are technology driven.
- Higher than avg. location quotient.
- >2000 companies with the potential for supply chain diversification into target sectors.

# **Advanced Manufacturing Thematic Areas**



Carbon Neutral & Circular Industries



Resilient Supply Networks







Clean energy transition

Digital Engineering & Manufacturing

**Health & Wellbeing** 







# Aligning Themes with SY Capabilities – Examples



### **Net Zero/Circular Industries**

Advanced material & component processing (composites, milling, forming, forging, casting)
Process, production & material efficiency incl repurposing & waste management
Fabrication, joining & additive tech

### Sustainable & Smart Mobility

Propulsion tech
Lightweighting/composites
Additive manufacturing
Low carbon transport eg EV, batteries
propulsion tech/power drives

### **Clean Energy Transition**

Nuclear Fusion & Reactors Hydrogen application incl. aviation Retrofit incl. renewable energy solutions CCUS, heating & cooling & energy recovery and efficiency

# Digital Engineering & Manufacturing

Design, modelling, prototyping & simulation
Sensors, validation and testing
Smart assembly, factories, machinery
Programming, AI, AR/VR & digital twins
Systems integration & Analytics

### Health & Well-Being

Bio-medical, devices & imaging Sports and chid health Nano material/devices Food mfg, proteins & packaging Data science

### **Resilient Supply Networks**

Material supply chain Machinery & equipment Business/supply chain models Transport & software

# **Value of Manufacturing in South Yorkshire**



Overview	South Yorkshire	UK	
Total GVA of the region	£28.1bn	£1,946.9bn	
Manufacturing GVA (% of total)	£3.4bn (12.1%)	£186.9bn (9.6%)	
Manufacturing employment (% of total)	60,000 (10.4%)	2,295,000 (7.6%)	
GVA/employee manufacturing 2019 (overall)	£59,500 (£49,500)	£83,500 (£67,000)	
Manufacturing	Manufacturing growth (overall growth)		
GVA 2015-2019	7.1% (11.7%)	12.3% (16.8%)	
Employment 2015-2019	Constant (2.8%)	1.9% (4.5%)	
GVA/employee 2015-2019	11.7% (8.6%)	10.2% (11.8%)	



# **Future Market Opportunities**











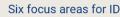


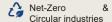


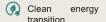


### SY Innovation opportunities short-list – 3 Horizons approach







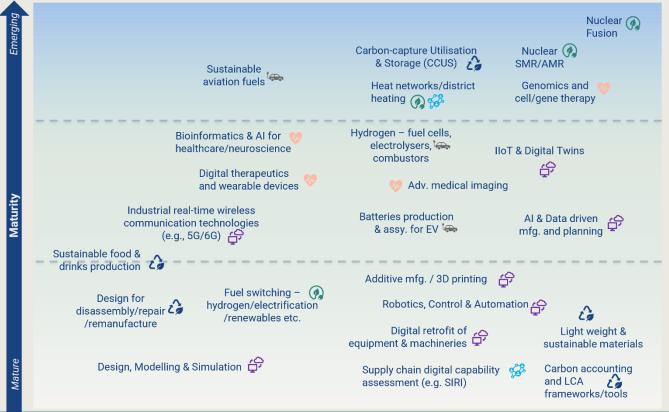


Sustainable & Smart Mobility

Digital Eng. & adv. Mfg.

Health & Wellbeing

Resilient supply networks



**Horizon 3** 

**Horizon 2** 

**Horizon 1** 

High

**Economic impact to SY** 

/erv Hiah

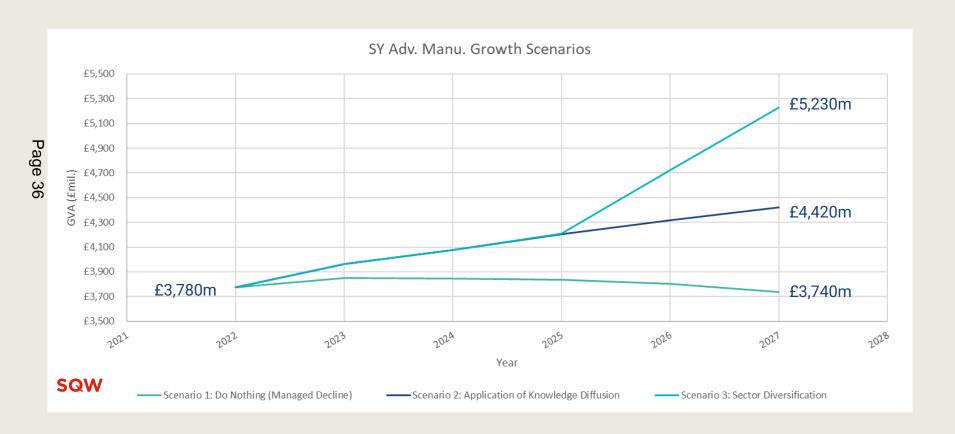
# **Horizons Approach**



- Horizon 1 leverages previous capital investment:
  - Encourage SMEs to grow through innovation;
  - Create integrated networks of manufacturing businesses to diversify into emerging supply chains;
  - Create clusters that can influence strategic investment
  - Increase regional visibility nationally through coherent & tailored regional missions
- Horizons 2 & 3 realise the benefits of emerging national priority sectors:
  - Secure Government contracts and coordinating a regional supply chain responses;
  - Develop the technical competence of the regional in target sectors: Aerospace,
     Automotive, Defence, Energy (incl. Hydrogen and Nuclear), Life-sciences and wellbeing,
     Food and Drinks

### **Growth Scenarios**





# **Advanced Manufacturing Thematic Areas**



#### Enabling capabilities: New market opportunity

Share

Carbon Accounting: new market opportunity and scale of emerging UK market opportunity n/a to Horizon 1

Supply Chain Readiness

Circularity & Sustainability

Industrial Digitalisation (Incl Retrofit) For Productivity & Energy Efficiency

Design, Modelling, Stimulation

Robotics, Automation & Control

Additive Manufacturing

Lightweight & Sustainable Materials: Aero, Auto, Defence, Offshore (£35bn)

Lightweight & Sustainable Materials

Existing SY Market Share SY Potential 2027

£0.6bn +5% productivity £0.6bn +5% productivity

£0.6bn +5% productivity

+5% productivity

+10% productivity +10% productivity

+10% productivity

+£30m

+10% productivity

#### Horizon 2

**Horizon 1** 

Supporting existing industries

and increase productivity/

competitiveness by adopting

existing technologies.

Benefits realised within

approx. 12 months.

Developing new technologies for growth in areas of market opportunity, building on emerging strengths in SY, Benefits realised within approx 2-4 yrs. Al & Data Driven Manufacturing

Hydrogen (Fuel Cells, Electrolysers, Combustors): Aero, Auto, Energy (£57.2bn)
Advanced Medical Imaging Tech: Life Sciences, Equipment Manufacturing (£36bn)

Digital Therapeutics & Wearable Devices: Life Sciences (£14bn) 5G & Wireless Connectivity Tech: Aero (£8.5bn)

Batteries Production/Assembly For EV: Auto, Aero, Equipment Manufacturing (£36bn)

Al & Bioinformatics: Life Sciences (£14bn)

Industrial Internet of Things (Iot) & Digital Twins: Aero, Auto, Defence, Metal Fabrication, Life Sciences (£46bn)

£480m

£0.6bn

£120m

£120m

£240m

£325m

£240m

£634m

£569m £157m

£32m

£590m £157m

£1,113m

+10% productivity

+£50m +£40m

+£20m

+£4m +£30m

+£17m

+£75m

#### **Horizon 3**

technologies for market opportunity areas where current SY business base is in a strong position to take advantage (with appropriate support). Benefits realised 4-10 vrs Advanced Medical Imaging, Digital Therapeutics & Wearable Devices: Life Sciences (As Above - £36bn +£14bn)

Nuclear SMR/AMR: Nuclear (£33bn)

Nuclear Fusion: Nuclear (N/A)
Genomics & Gene Therapy: Life Sciences (£14bn)

Carbon Capture Use & Storage (CCUS): Energy (£12bn by 2030)

Heat Networks/District Zoning: Energy (Impact on Energy Efficiency & Resilient Energy Supply)

Sustainable Aviation Fuel: Aero (£8bn by 2035)

(£569m+£157m)

£46m n/a £157m

£456m n/a

£32m

2 start-ups +£400m

L/T impacts

+£15m +£185m

Efficiency/Resilience

+£42m



# **Barriers to Success**















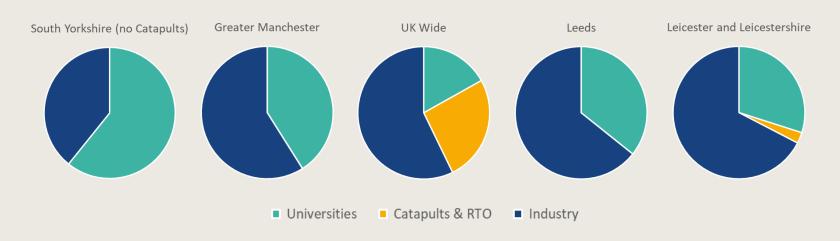


# Significant funding, but skewed...



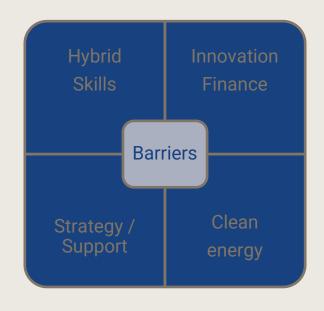
#### Innovate UK funding awarded (since 1999)

Region	Total	Universities	Catapults & RTO	Industry
South Yorkshire	£ 508,551,525	£ 156,209,271	£ 251,508,722	£ 100,833,532
Greater Manchester	£ 200,772,595	£ 82,365,717	£ -	£ 118,406,878
Leeds	£ 167,639,169	£ 59,850,135	£ -	£ 107,789,034
Leicestershire	£ 225,403,306	£ 67,395,467	£ 6,055,280	£ 151,952,559
UK wide	£ 13,355,997,599	£ 2,257,337,470	£ 3,458,166,551	£ 7,640,493,578



# **The Business Perspective**





Risk / Barrier	Description	
Skills availability	<ul> <li>Local labour mostly has experience in "traditional" manufacturing and engineering capabilities.</li> <li>Attracting talent with a hybrid manufacturing skillset and retaining university alumni with relevant expertise is critical.</li> </ul>	
Support to scale	Small business, especially those with high manufacturing demands, lack capital and facilities to scale up operations.  It is often difficult to get SME financing for low TRL projects, support is needed to de-risk investment  Many SMEs are focused on the day-to-day, and don't have the capacity to collaborate and expand into new areas	
Unclear regional strategy	<ul> <li>There is limited cross-sector support within the region.</li> <li>This is largely driven by a lack of shared understanding across different stakeholders on the strategy and direction of AMID.</li> </ul>	
Access to capital	<ul> <li>Micro and small sized businesses highlighted a lack of channels to access funding or support for grants in efforts to reduce risk of investment.</li> <li>This limits the growth trajectory of these entities.</li> </ul>	
Access to clean energy	<ul> <li>Growth of manufacturing, digital and sustainability businesses within the district requires sufficient energy, with growing demand for renewable energy sources.</li> </ul>	



# Recommendations

















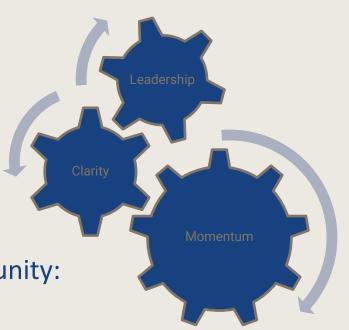
# **Call to Action**



- Provide coherent innovation Leadership:
  - To central Government
  - For local businesses
  - To attract inward investors

Provide clarity of innovation offering:

- Which regional strengths will you back?
- What are you offering?
- How can the community engage?
- Maintain momentum with Innovation Community:
  - Continue engaging community
  - Providing tangible "quick wins"
  - Co-create credible strategy



# **Recommended Implementation Plan**



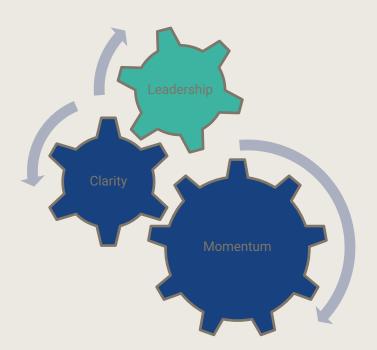
### Provide coherent innovation Leadership:

 Develop an integrated proposition and regional partnership agreement with UKRI to attract placebased innovation support

age 43

OEMS and TIER 1s to provide sectoral leadership and steer to local supply chains for capability development/export

Targeted grant funding support for long tail of innovation inactive firms in SY



# **Recommended Implementation Plan**

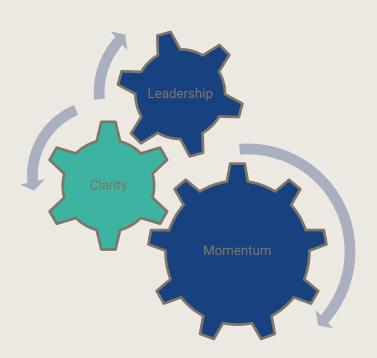


### Provide clarity of innovation offering:

 Supply chain mapping and gap analysis of highgrowth potential sectors to provide the position,
 both geographically and in the value chain

2) Identify target supply chains for integration and/or diversification

3) Clarify AMID innovation support offerings and facilitate shared access (across all sectors) to existing research facilities and services

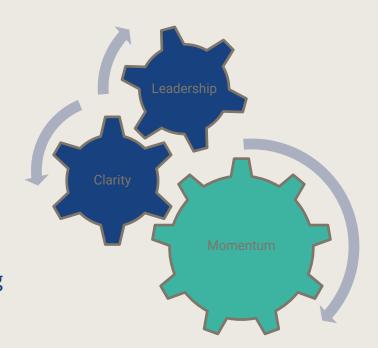


# **Recommended Implementation Plan**



### Maintain momentum with Innovation Community:

- 1) Knowledge providers to proactively engage with the wider business base to ensure knowledge diffusion
- 2) Invest in skills initiatives esp. on digital, industrial decarbonisation, energy, automation and health tech Roll out company level diagnostic tools and develop an integrated range of innovation advisory services
- 4) Prioritise innovation support for 6 themes, taking a portfolio approach across all three horizons (ensuring infrastructure support to de- risk Horizon 2/3 opportunities)





# To sum up

















- Advanced materials
- Metallics processing
- World class research and innovation capabilities (including robotics, digital)

#### Emergent opportunities:

- Life sciences; health & wellbeing
- Clean energy; hydrogen; nuclear
- Defence

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Example of regional Advanced Manufacturing

### — Required Ecosystem:

- Establish supply chain clusters connecting SMEs with OEMs and RTOs
- Ensure skills, innovation, finance are accessible to all to unlock growth
- Build consensus and coherent leadership to develop an integrated proposition and improve visibility at regional and National level



# **Open Discussion**



















#### Thursday, 18 May 2023

### MCA and LEP Policy and Programmes Update

Is the paper exempt from the press and public? No

Reason why exempt: Not applicable

Purpose of this report: Discussion

Strategic Priority Cross Cutting

#### **Director Approving Submission of the Report:**

Clare Monaghan, Executive Director of Policy and Strategic Development

### Report Author(s):

Philip Cooper, External Affairs Officer philip.cooper@southyorkshire-ca.gov.uk

#### **Recommendations:**

Members to note a general update on activity being undertaken by the LEP and MCA outside of the agenda items under discussion.

### **List of Appendices Included:**

A May 2023 Policy and Programmes Update





#### May 2023

#### **Policy and Programmes Update**

#### **Purpose of Report**

To provide LEP Board Members with a general update on activity being undertaken by the LEP and MCA outside of the agenda items under discussion.

#### 1. Countdown to public control of tram system

In less than one year's time, South Yorkshire will have a publicly owned, publicly operated, tram network. In March 2024, Stagecoach's operating contract for Supertram ends. This change in ownership forms part of the region's wider ambitions to upgrade the Supertram, as part of a fully integrated public transport network. SYMCA recently secured a £100 million Government grant to modernise parts of the system, including track and infrastructure improvements and better facilities for passengers.

#### 2. New electric vehicle charging points

SYMCA is investing £1.8m in new electric vehicle charging points across the region, to support the growing numbers of people choosing to drive electric cars. The MCA has been working with Barnsley, Doncaster, Rotherham and Sheffield Councils to create more than 160 new charging points, which will be fully operational starting from April. The money for the charge points comes from SYMCA-secured funding from the Northern Powerhouse Investment Fund, the Government's Getting Building Fund, and the North East and Yorkshire Net Zero Hub.

#### 3. £7m investment in Hybrid Air Vehicles

The Mayor and MCA have approved a package of investment and support for plans by Hybrid Air Vehicles (HAV) to produce its pioneering new low carbon aircraft, Airlander 10, in Doncaster. HAV is a UK-based leader in sustainable aircraft technology and the Airlander 10 is an ultra-low emissions aircraft, capable of carrying 100 passengers or ten tonnes of freight. The loan investment, worth £7m will be used to support HAV to begin investing in facilities, talent and supply chains in South Yorkshire. HAV's plans will create over 1,200 new high value and highly skilled jobs in new green technologies, and further jobs and opportunities from growth across the company's supply chains.

#### 4. Working Win secures £5.9m

Following discussions with Government to stop the trailblazing Working Win scheme from being scrapped, the Mayor announced grant funding to keep it going for a further two years, helping thousands of people with health conditions to find or stay in work. The programme has already supported more than 6,500 people in South Yorkshire. Through the new funding, it is expected that a further 3,000 people with physical or mental health conditions will be supported until March 2025. The new funding, secured by the MCA, is

part of the Individual Placement and Support in Primary Care (IPSPC) initiative which aims to promote inclusive growth by supporting people to access employment.

#### 5. £4.9m Made Smarter scheme to help businesses to digitalise

Manufacturing businesses across Yorkshire and Humber can now join the £4.9m Made Smarter scheme, which will help them digitalise their business through expert business support. The programme, which is being delivered by SYMCA, encourages digital adoption amongst SMEs in Yorkshire and Humber and includes intensive one-to-one advice and support. The Made Smarter programme recently announced that Oxford Innovation Advice has been awarded the delivery contract for the second round of the digital upskilling scheme. They will lead on the overall programme management, contract management and governance with support from Brook Consulting, Edge Digital, the Institute of Manufacturing and the in-house team at SYMCA.

#### 6. Ultimate Battery Co invest in Rotherham

Ultimate Battery Co (UBC) has chosen a site in Rotherham to be the home of its first manufacturing plant and innovation centre, which will create 500 highly skilled jobs by early 2026. The new site in Thurcroft will be one of the first new battery manufacturing sites in the UK and will manufacture the next generation of both starter lighting and ignition batteries for vehicles, and energy storage solutions utilising UBC's patented 'Duophasic' technology. A recruitment drive is underway for various roles in the first of a series of production teams, and recruitment will continue over the forthcoming months as their production ramps up.

### 7. Thematic Board updates

#### 7.1 Education, Skills & Employability

- Progression to Business Justification Case Barnsley College Welding and Fabrication Academy to deliver an industry-designed and supported training facility for the South Yorkshire region, specialising in a key skills shortage area: welding and fabrication.
- Progression to Business Justification Case The Aspire to Be programme, a unique tailored and individualised non-accredited programme delivered by the Doncaster Deaf Trust for the people of South Yorkshire who have Special Educational Needs & Disabilities. The programme promotes sector-specific learning, independence skills, and mindset change in readiness to enter/re-enter the world of work and/or pathways into FE/Apprenticeships where applicable.

#### 7.2 Business Recovery and Growth

- Approve the progression of £1.5m Equity Investment in Northern Gritstone to full-approval and contract award a venture in partnership with the universities of Leeds, Manchester, and Sheffield which has a 'profit with purpose' motive. It aims to match long term capital to the commercial opportunities being generated from IP from the universities and regions.
- Approve the progression of Hybrid Air Vehicles scheme to full-approval and contract award – £7m of loan funding funded from Doncaster's allocation of Gainshare towards total project costs of £27.5m. Loan funding would be used over 12 months enabling the creation and establishment of the South Yorkshire aircraft manufacturing base.

#### 7.3 Housing and Infrastructure

- £3m grant award approved for the West Bar, Sheffield project to regenerate 7.33 acres of brownfield site to deliver a mixed-use district to include grade A office space, new apartments and public realm.
- £1.3m grant award approved for the Blue Mans Way, Catcliffe project where 76 new affordable housing units are planned to be delivered on a brownfield site located in Rotherham.
- £0.75m grant award approved for the Sky House, Devonshire Quarter project to deliver 60 residential units in the southwest of Sheffield City Centre.

#### 7.4 Transport and Environment

- Extension of the £2 fare cap on tram approved, to align with the timescales of the national bus scheme to 30 June 2023.
- Progression of Doncaster Active Travel Mexborough Gateway Full Business Case and award of £1.2m grant.





### Thursday, 18 May 2023

#### **Forward Plan**

Is the paper exempt from the press and No

public?

Reason why exempt: Not applicable

Purpose of this report: Discussion

Strategic Priority Cross Cutting

### **Director Approving Submission of the Report:**

Clare Monaghan, Executive Director of Policy and Strategic Development

### Report Author(s):

Andy Gates, Assistant Director External Affairs andrew.gates@southyorkshire-ca.gov.uk

#### **Recommendations:**

Members are asked to note suggested agenda items for future meetings and to suggest any changes or additions.

### **List of Appendices Included:**

A Proposed 2023/24 Forward Plan



# **Local Enterprise Partnership – Forward Plan**

Meeting Date	Suggested Agenda items	
13 <sup>th</sup> July 2023 (AGM)	<ul> <li>MCA / Private Sector governance arrangements</li> <li>Business Resilience / Business Support Landscape</li> <li>Supporting Investment in SY – Northern Gritstone</li> <li>South Yorkshire Life Sciences Sector</li> <li>Skills Strategy</li> <li>SYMCA / UKRI Joint Action Plan development</li> </ul>	

