

# **National Manufacturing Institute Scotland Fairer Scotland Duty Assessment**

## **Summary**

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**Scottish Government**  
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## Fairer Scotland Duty Summary

<p><b>Title of Policy, Strategy, Programme etc</b></p>	<p style="text-align: center;"><b>National Manufacturing Institute Scotland</b></p>
<p><b>Summary of aims and expected outcomes of strategy, proposal, programme or policy</b></p>	<p>The Scottish Government recognises that an innovative, thriving and international facing manufacturing sector can play a crucial role in boosting Scotland’s productivity performance.</p> <p>Key to our ambition in the manufacturing sector is the establishment of a manufacturing centre of excellence and skills academy – the National Manufacturing Institute Scotland (NMIS). The NMIS vision is for an industry-led international centre of manufacturing expertise where research, industry and the public sector work together to transform skills, productivity and innovation to attract investment and make Scotland a global leader in advanced manufacturing.</p> <p>NMIS strategic objectives are:</p> <ul style="list-style-type: none"> <li>• Increase the productivity and innovation performance of manufacturing businesses based in Scotland and reduce the perceived individual company risk associated with innovation.</li> <li>• Stimulate manufacturing investment, both inward and from businesses already located in Scotland, to increase the competitiveness of Scotland's manufacturing base over the medium to longer term in a highly advanced manufacturing environment.</li> <li>• Catalyse job creation and strengthen supply chain linkages, increasing the relative contribution of manufacturing to Scotland's economy.</li> <li>• Inspire and attract a diverse talent pool to work in manufacturing, equipping existing and future employees with the skills, both technical and practical, to prosper in an increasingly digital and automated manufacturing environment.</li> <li>• Minimise displacement of companies and jobs, including through outreach initiatives which spread benefits and impact across Scotland and beyond.</li> </ul> <p>The programme will deliver against a number of the National Performance Framework outcomes, principally:</p> <ul style="list-style-type: none"> <li>• Having a globally-competitive, entrepreneurial, inclusive sustainable economy;</li> </ul>

	<ul style="list-style-type: none"> <li>• We are well-educated, skilled and able to contribute to society; and</li> <li>• We have thriving and innovative businesses, with quality jobs and fair work for everyone</li> </ul>
<p><b>Summary of evidence</b></p>	<p>The reach of NMIS will be national from its physical location in Renfrewshire. This requires consideration not only of the local impacts of building a new facility, but also the wider impacts that the facility and its services will have on the manufacturing base and how those will impact positively on equality outcomes.</p> <p>National and local context</p> <p>The Scottish Index of Multiple Deprivation (SIMD) is an official statistics tool to help identify relative deprivation across areas of Scotland, ranking the country into 6,976 data zones from most to least deprived. Renfrewshire and Glasgow City Councils areas contain some of the most deprived areas in Scotland:</p> <ul style="list-style-type: none"> <li>• Renfrewshire has 26% of deprived zones in the most deprived 20% of Scotland</li> <li>• Glasgow City region has 49% of deprived zones in the most deprived 20% of Scotland</li> </ul> <p>Data from the Office for National Statistics - through the National Online Manpower Information System (NOMIS) service - for the period January 2018 to December 2018 show that the unemployment rate in Renfrewshire at 4.6%<sup>1</sup> was above the Scotland average of 4.2%. The average weekly wage in Renfrewshire of £523.50 was also below the Scotland average of £563.20.<sup>2</sup></p> <p>Manufacturing sector</p> <p>The manufacturing sector is disproportionately important to the Scottish economy. It accounts for over 180,000 jobs, over half of our business expenditure on research and development spend, as well as half of our international exports. The latest Scottish Annual Business Statistics show that turnover in the manufacturing sector in Scotland in 2016 was £33.8 billion and the sector contributed £12.7 billion in gross value added (GVA). Productivity in the manufacturing sector (as measured by GVA per head) is higher on average than across Scotland as a whole (£69,853 and £45,460 respectively in 2016). The median hourly wage in the manufacturing sector in</p>

1 Source – Labour Market Profile – Renfrewshire - <http://www.nomisweb.co.uk/reports/lmp/la/1946157429/printable.aspx>

2 Source – ONS – “Employee earnings in the UK:2018” -

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2018>

Scotland in 2016 was £12.96 compared with £12.17 for Scotland as a whole.<sup>3</sup>

Against this generally positive background, there are inequalities that require to be considered. For example:

- The gender pay gap in manufacturing in Scotland is 18%.<sup>4</sup>
- Data taken from the Scottish Census shows that, although 48.5% of Scotland's workforce is female, only 25.8% of the workforce in manufacturing is female.<sup>5</sup>

An analysis of the concentration of Scotland's existing manufacturing base by local authority area (taking into account various indicators including that areas proportion of Scotland's manufacturing GVA, proportion of business base in manufacturing, proportion of Scotland's large manufacturing enterprises and proportion of Scotland's foreign owned manufacturing enterprises) indicates a broad correlation between local authority areas with a strong manufacturing base and larger proportions of deprived areas.

While this may seem paradoxical given the higher than average wage in manufacturing sector, it is likely a reflection of the wide range of indicators covered by SIMD and the socio-economic characteristics of these areas relative to the areas manufacturing sector. Commuting patterns also mean that many people do not reside in the same area in which they work, especially in more densely populated areas like the Central Belt of Scotland.

However, where manufacturing is a relative strength of an area, it provides a solid basis on which to build the local economy and in a way which offers a route to above average paying employment with associated knock-on impacts of increasing supply chain opportunities and demand for wider services in the local economy. This can further create or support additional employment opportunities in an area.

NMIS is a national organisation operating from Renfrewshire and will deliver national benefits and contribute to the five outcomes which underpin inclusive growth:

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3 Source – "Financial Scrutiny Unit Briefing – Earnings in Scotland 1016" -

[http://www.parliament.scot/ResearchBriefingsAndFactsheets/S5/SB\\_16-92\\_Earnings\\_in\\_Scotland\\_2016.pdf](http://www.parliament.scot/ResearchBriefingsAndFactsheets/S5/SB_16-92_Earnings_in_Scotland_2016.pdf)

4 Source – 'The Gender Pay Gap in Scotland' – Scottish Government March 2017 - <https://www.gov.scot/publications/gender-pay-gap-scotland-update-analysis-time-series-data/>

5 Data taken from Scotland's Census 2011 - <https://www.scotlandscensus.gov.uk/census-results>

- Economic performance and productivity - NMIS specialisms will be linked to manufacturing niches which reflect Scotland's manufacturing strengths.
- Labour market access - skills development for both existing and future manufacturing employees will be a key part of NMIS.
- Fair work - enabling firms based in Scotland to operate at higher levels of the value chain will support increased wages and working with businesses and their supply chain to win major contracts in a range of sub-sectors will support longer-term work security.
- People - Median gross full-time earnings in manufacturing were slightly above the average for all industries and services in 2016 (£12.96 p/h compared to £12.17 p/h) and manufacturing companies are spread across Scotland.
- Place – NMIS services will reach across Scotland through physical and digital access channels. An Advancing Manufacturing Challenge Fund is now in operation which seeks to enhance Scotland's advanced manufacturing research and skills development capability. It has a particular focus on benefiting SME companies through the creation of a national network of regionally-based initiatives to stimulate and improve the innovation performance of small and medium enterprises (SMEs), thus complementing NMIS. The development of this Challenge Fund emerged from thinking about options to enable NMIS to have a national reach and deliver against inclusive growth objectives beyond the immediate location of the physical building.

The NMIS Economic Impact Assessment concluded that it could deliver the following net impacts to the Scottish economy:

	Person Year Equivalent (PYE) Jobs	Gross Value Added (GVA)
by Year 5	250 – 410	£16m - £23m
by Year 10	1,700 - 3,320	£109m - £174m
by Year 15	3,860 – 7,710	£204m - £404m

#### NMIS impact on inequalities of outcome

Renfrewshire has areas with some of the highest levels of deprivation in Scotland and below average life expectancy. Addressing these issues will require specific and targeted interventions as part of a wider economic strategy. NMIS provides an opportunity to impact

positively on some of those inequalities as part of that wider economic strategy.

As the operator of NMIS, the University of Strathclyde will ensure that its underlying policies will apply fully to NMIS. For example, the University has an Athena SWAN (Scientific Women's Academic Network) Charter, run by the Equality Challenge Unit, which is given to higher education institutions to recognise commitment and progress towards advancing gender equality. In addition, the construction of NMIS will include strong community benefit specifications. The University of Strathclyde is also a signatory of the Business Pledge, which includes commitments to paying the living wage and this will naturally flow into the NMIS business model. This will ensure that entry level or lower skilled roles like cleaners or reception staff in the NMIS building will receive the living wage. The NMIS team will continue to engage with Renfrewshire Council and other One Scotland Partners to maximise community engagement over the lifetime of NMIS.

The procurement contract being let by Renfrewshire Council for the £39.1 million Glasgow Airport Investment Area (GAIA) City Deal project includes several community benefits clauses, which represents an opportunity for replication in the NMIS design and build contract. These are structured to deliver positive impacts to the local community including activity to attract future talent locally, deliver qualifications and work placements and engage and support local businesses. The community benefits include support for new local jobs, including apprenticeships and jobs targeted at graduates, priority groups and support for vocational qualifications. They also include career events, a school mentoring programme and site visit and work experience placements for local school pupils. Support for local businesses includes a supply chain briefing for SMEs and business mentoring for two local SMEs. Additional community benefits include support for local community projects, with the potential for further financial support being offered.

Skills Development Scotland (SDS) will have a very important role in developing the opportunity for NMIS to reduce inequality of outcome through development of the skills proposition. SDS has statutory responsibilities around advancing equality of opportunity and eliminating discrimination, which will be an important element in any interactions with NMIS customer companies. While SDS may be developing bespoke projects as part of the NMIS

development, there will be opportunities to advance the SDS agenda around general equalities and inclusive growth initiatives, as outlined in the SDS Equality Mainstreaming Report and the Modern Apprenticeship Equality Action Plan. For example, SDS interaction with employers engaging with NMIS may look to offer advice on additional funds or training that may be available, or encourage them to review recruitment practices or take action to address underrepresentation in their workforce or improve their access to a wider talent pool.

It is important to note that the overarching rationale for NMIS is not as a direct policy objective to reduce, or mitigate, inequalities of outcome. NMIS is one element (albeit an extremely significant element) of a much wider advanced manufacturing system of support in Scotland. However, such a significant public investment must, and indeed is already, contributing towards national inclusive growth objectives.

The development of NMIS was subject to a robust 5-case model business case in accordance with the Scottish Enterprise Project Lifecycle model, which is based on best practice business case development. This included strategic, economic, commercial, financial and management cases with the equivalent of Gateway Reviews at appropriate stages. The Full Business Case was approved by the Scottish Enterprise (SE) Board and development of the business case was underpinned by the agreed NMIS vision and strategic objectives. Important pieces of evidence underpinning the business case include an Economic Impact Assessment and a demand assessment produced by O’Herlihy and Associates in December 2018, supplemented by an extension report in February 2019 to include outputs from a wider sample of companies engaged by SMAS, SE account managers and SDS.

It was clear from these reports that a manufacturing centre of excellence was required to meet a market failure and stimulate greater innovation and collaboration across manufacturing companies of different size and sector across Scotland, as well as contribute to the development of the advanced manufacturing skills required to enable these companies to prosper.

The success of the Advanced Forming Research Centre (AFRC) in Renfrewshire, which will become part of the NMIS Group, and the Advanced Manufacturing Research

Centre in Sheffield provide practical examples of the impact NMIS can deliver.

Consultations have been held with manufacturing businesses throughout Scotland, including SMEs, as part of the various demand assessments carried out for NMIS. These articulated the outcomes which industry feels NMIS needs to deliver and inform the strategic objectives for NMIS, including around skills development.

It is recognised that there has been no consultation conducted on NMIS with specific communities of interest. However, the NMIS programme partners appreciate that significant value can be gained from engaging with a number of relevant organisations. The input from these organisations will be important to consider what further action can be taken to maximise opportunities for getting individuals from disadvantaged groups into the manufacturing sector. One example might be to use the leverage of NMIS to target apprentices through partners such as local colleges and community planning partnerships.

It is worth reflecting that there has been significant consultation on closely related projects, which may act as a 'proxy' for the NMIS development – for example, the GAIA City Deal Project. A series of public exhibitions of the City Deal project were conducted and public responses were collated. This included a public consultation day event as part of the preparation of the Planning Permission in Principle application during 2018. Previously exhibitions were held in May and December 2016 were publicised in advance in local newspapers and on the websites of Renfrewshire, West Dunbartonshire and Glasgow City councils, as well as on their respective social media channels. Renfrewshire Council also distributed more than 5,000 flyers and posters were displayed in communities throughout the three authorities.

Almost 500 surveys gauging public opinion on the projects were completed, with the results showing the vast majority of respondents are supportive of the plans and positive about what they mean for the future:

- 88% agreed the new 'opening' bridge across the Clyde and works associated with it will create jobs and help businesses expand
- 84% also agreed the project will improve their access to healthcare and education facilities, employment and public transport on the other side of the river.



	<ul style="list-style-type: none"> <li>• 85% per cent said significant employment opportunities will be created by the development of sites for business next to Glasgow Airport and the accompanying realignment of Abbotsinch Road.</li> </ul>
<p><b>Summary of assessment findings</b></p>	<p>NMIS will have a national reach to achieve the aim of delivering transformative change in the manufacturing sector from its physical base in Renfrewshire. It aims to drive a transformation in skills, productivity and manufacturing right across Scotland. SME and large businesses in the manufacturing sector across Scotland and beyond will be target customers and, through the Manufacturing Skills Academy, their employees (existing and new).</p> <p>The physical location of the NMIS building means there will be additional and direct employment opportunities in the Renfrewshire area, including through the construction phase when community benefits will be delivered. NMIS also provides opportunities to deliver inclusive growth across the rest of Scotland as well.</p> <p>The design work on NMIS will deliver a number of community benefits through the contract with the design team. These include job opportunities for local students, an apprentice employed by the design studio to work on the project while studying towards an SVQ (Scottish Vocational Qualification), work experience offers to pupils from local schools, visits to local schools by the design team and further ongoing involvement with the Developing the Young Workforce initiative. It is envisaged that similar benefits, on a larger scale, will be delivered through the construction phase.</p> <p>It is worth noting that community benefits are also an important element of the contract being let by Renfrewshire Council for the £39 million City Deal investment to open up the AMIDS site. This should provide further opportunity to achieve positive local impacts through, for example, offers of work experience and employment to different groups, careers events and upskilling through achievement of national vocational qualifications.</p> <p>That said, as part of the NMIS project, a monitoring and evaluation framework has been developed. The data recorded will be consistent with other official and national statistics definitions and will thus be comparable to data collected more widely on the economy.</p>

This evidence will be of great value, with the ability to analyse the data from a variety of angles, including from an inclusive growth and equality lens. This will provide the detail required to understand the effect that NMIS is having on inequality of income indicators and the evidence base upon which changes to operations can be made if opportunities to further impact on inequalities becomes evident.

During the development of the NMIS business case, a wide range of ideas that contribute towards inclusive growth objectives (and which will contribute towards reducing inequality of outcomes) were identified and have been incorporated into the NMIS proposals or taken forward separately. Some of these are already delivering impact.

Examples include:

- The recruitment of a dedicated SME engagement team to ensure NMIS can deliver for SMEs
- To ensure NMIS delivers across Scotland, an outreach work stream has been instigated and several Memoranda of Understanding are already in place with third parties, with an Outreach Forum to be established soon.
- The Advancing Manufacturing Challenge Fund (AMCF) will support development of physical manufacturing capacity in other areas of Scotland, proactively exploring where and how to connect up NMIS with City and Regional Deal funded projects
- A Memorandum of Understanding (MoU) is in place with the Scottish Research Partnership in Engineering (SRPe) to deliver Industry Doctorates alongside Continuous Professional Development modules, which will bring in the expertise and connections of the wider Scottish university base to the NMIS project
- The Manufacturing Skills Academy – which is part of NMIS -will support training professionals to deliver advanced manufacturing training locally across Scotland, also resulting in the upskilling/reskilling of college and university lecturers
- Opening up the Netherton Farm site and providing the enabling infrastructure through the City Deal project will result in significant community benefits being delivered, as well as what will be delivered in community benefits through the NMIS design and build contract.

NMIS activities that could be considered going forward to further strengthen the inclusive growth impact and to reduce inequalities include:

- College and school visits and competitions to engage and inspire future workforces.
- Local community engagement events to raise awareness of NMIS in the surrounding area and to inspire people to consider careers in manufacturing either for themselves or those they influence (like children).
- Use of virtual reality and digital twins to open up NMIS expertise to colleges and partners across Scotland.
- Public realm artwork developed by schools in surrounding areas, supplemented with school visits, may entice pupils to view a career in manufacturing as an attractive option.
- Encouraging NMIS members to consider outreach engagements with the surrounding community as part of their corporate social responsibility. This could include delivering events which are hosted at NMIS or a series of engagements with local teachers to then enable the teachers to promote manufacturing as a career within their schools.
- A specific (but not exclusive) focus of University of Strathclyde outreach to disadvantaged areas or people from disadvantaged backgrounds to recruit students into university (helping seed future skilled workforces).
- Exploring the scope to include clauses around outreach to encourage inclusive growth within MoU and Collaboration Agreements between NMIS and Partners / Associates.
- Establishing a temporary office space in Paisley High Street to act as a meeting point and place to engage potential customers and others while the physical facilities are being build. A town centre office would provide a visual NMIS presence, ensure accessibility from public transport and support wider efforts to make town centres thriving places.
- Promoting the Business Pledge and Fair Work principals within the Forum. In order to ensure this is properly executed, engagement with the relevant SG teams and links in to the proposed employer networks will need to be undertaken. These will be particularly important for supporting other disadvantaged groups such as disabled people and ethnic minorities - promoting Fair Work principles

and the Business Pledge will help address their needs, helping them into employment and leadership positions in companies assisted and the partnership itself.

As noted above, there are a number of actions being undertaken to ensure that NMIS has a positive impact on reducing inequality of outcomes in both Renfrewshire and Scotland more widely. However, further actions could be taken to lead by example and encourage others to follow in addressing the gender disparities in manufacturing employment and pay. As such, NMIS will tie in with wider Scottish Government policies to do this – for example, with STEM (Science, Technology, Engineering and Mathematics) strategies seeking to increase female representation in the workplace, skills and fair work strategies, etc. The NMIS Programme Management Office will work with relevant NMIS operational teams as they are recruited to make connections and explore the practicalities of making these links work.

More widely, associated actions which might be considered include accessible child care provision in close proximity to NMIS (in the wider AMIDS area around the site) and encouraging family friendly working policies. This will require engagement with expert organisations, who can help guide further action in this area and is something the work plan for AMIDS development may wish to consider.

Ensuring that public transport is easily available to the site could also help to encourage financially and socially disadvantaged groups to take advantage of employment and other opportunities offered by NMIS and the wider AMIDS area. Again this fits more within the development of AMIDS and is something which future work plans for AMIDS may wish to consider.

NMIS is being delivered within a programme structure, with Scottish Government providing the Programme Management function. Operational planning is one workstream within the broad NMIS programme and is where operational arrangements are still being developed. This provides significant scope to ensure that the principles outlined in this document, with regards to maximising the impact of NMIS on reducing inequality of outcome in the manufacturing sector, are brought to bear. Equally, the physical building of NMIS is still to be

	<p>concluded, and this will provide further, direct impacts of reducing inequality of outcome in the Renfrewshire area.</p> <p>However, it is important to note that the principal focus for NMIS is to advance the manufacturing sector in Scotland and there is a finite budget attributed to the NMIS programme to achieve that ambition. A high proportion of this budget will be associated with the physical NMIS build, while resource funding needs to cover vital things like recruitment, salaries, professional services associated with finances, legal agreements etc. and marketing of the core offer. While the NMIS partners involved in delivery will seek to maximise opportunities to reduce inequality of outcome and promote equality (and reduce discrimination), this must be considered within the context of budgetary constraints.</p>
<b>Sign off</b>	<b>Name: Dermot Rhatigan</b> <b>Job title: Manufacturing &amp; Industries Deputy Director</b>



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