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Making Scotland's Future:

A Recovery Plan
For Manufacturing

Draft for consultation

Foreword

Scotland has always been a nation of creators and makers and our manufacturing innovation and expertise continues to be a critical part of our economy, supporting over half of Scotland's international exports.

Manufacturing is a key source of business research and development, and of high-quality employment. Pre-COVID-19 figures show the sector was worth £12.5 billion in Gross Value Added (GVA) – approximately 13% of total GVA – and employed approximately 170,000 people, many in highly-skilled jobs.

Manufacturing businesses, small and large, are found in urban and rural communities all over Scotland. And it's a diverse sector. Food and drink makes up a third of GVA but the size and value of less traditional sub-sectors is growing. Computer and electronics manufacturing, for example, now accounts for one in every 15 manufacturing jobs.

Like many parts of the economy, however, manufacturing has been deeply affected by the COVID-19 pandemic, and in different ways. While some sectors such as aerospace and oil and gas have inevitably felt the full force of the public health restrictions on our lives, they and others are identifying opportunities to adapt, innovate and grow.

Nowhere has this been more apparent than among those companies which played an integral role in the immediate pandemic response, stepping up when asked to divert production towards the manufacture of personal protective equipment (PPE) and other life-saving NHS supplies. Pre-COVID-19, all PPE sourced by NHS

Scotland came from manufacturers outside Scotland, but this winter nearly half of PPE will be supplied from Scotland.

This type of flexibility and adaptability, particularly in terms of embracing digital solutions, must become part of our DNA if manufacturing is to succeed in increasingly volatile market conditions. COVID-19 and the UK's exit from the EU have brought into much sharper focus the challenges that manufacturing businesses face in the 21st century: economic uncertainty, rapid modernisation and international trade barriers can all impact on their ability to survive and grow.

Present circumstances also highlight that change can bring opportunities in the shape of new products, new customers and new markets. The task that lies ahead of us is to work in partnership with every part of the manufacturing sector so that businesses can survive and thrive; weathering the current storm of COVID-19, preparing for the challenges presented by the EU exit, adapting to future global trends such as digitisation and the transition to net zero, and looking ahead to a brighter future.

A successful, vibrant, diverse and advanced manufacturing sector is critical to our long-term economic recovery and success: creating jobs, driving innovation and growth, and boosting productivity and wellbeing.

In line with the report of the [Advisory Group on Economic Recovery](#), which recommended that bespoke sector recovery plans are put in place, *Making Scotland's Future: A Recovery Plan For Manufacturing* proposes a series of actions for public agencies, industry and academia to take forward by the end of 2021. They are designed to secure a strong, sustainable future for the manufacturing sector across four inter-dependent priority areas:

- Collaboration and networks
- Supply chains and competitiveness
- Adaptation and transformation
- Skills and workforce

These proposals will be the subject of rapid engagement with the sector's stakeholders over the next two months, before being finalised in early 2021. That will include seeking views on complementary Equality and Fairer Scotland Impact Assessments, reflecting our collective commitment to fairer outcomes and to ensuring these inform final actions.

Common to each area of work is a commitment to putting sustainable manufacturing at the heart of the sector's recovery. This is not just the right thing to do in the face of the climate emergency, but a win-win for the sector too: reducing companies' emissions and costs; and ensuring Scottish manufacturing can compete in domestic and global markets as low carbon products become increasingly attractive to consumers and buyers.

Manufacturing has an opportunity to be at the heart of a global green recovery, helping Scotland meet its target of generating net zero emissions by 2045 and increasing our international competitiveness by making a more attractive place for trade and investment. The £1.6 billion low carbon funding pledged in the Programme for Government, including a £100 million Green Jobs Fund and £60 million for industrial decarbonisation, will help to secure a just transition to a net zero economy.

Making Scotland's Future: A Recovery Plan For Manufacturing sets out a bold agenda for the next year, and strengthens the platform for longer-term growth.

While the impact of COVID-19 has been a severe blow for many in the sector, over recent years Scotland has created an enviable portfolio of manufacturing support assets and enhanced support for manufacturers. This includes the Advancing Manufacturing Challenge Fund, our Innovation Centres and the National Manufacturing Institute Scotland (NMIS), that are capable of fundamentally changing how companies harness the power of technology and innovation to drive growth.

So, while this is undoubtedly an extremely challenging time for the manufacturing sector, we have in place strong foundations. By building on these and by harnessing our collective talent, expertise and pioneering spirit we can stand tall as a nation known for inventing, designing, developing and building world-leading products and technologies.

Manufacturing made Scotland's past. Now it's time to work together to ensure it makes Scotland's future.



Fiona Hyslop MSP
Cabinet Secretary for Economy,
Fair Work and Culture

Fair Work commitment

The manufacturing sector, its workers and those tasked with supporting them face the greatest challenge in generations. What began as a public health crisis has become a global economic crisis – growth has stalled, businesses have had to close and there have been many job losses with the likelihood of more to come. The pandemic has also highlighted, and in many cases worsened, the inequalities in our society, with those with the least before the crisis often worst affected by both the health and economic impacts.

That is why Fair Work is more important than ever and must be at the heart of our economic recovery and renewal. The Scottish Government's dedication to this agenda is long-standing and is [shared by partners](#) across the public, private and third sectors, trade unions and others who will help us develop and deliver this recovery plan. The principles of Fair Work will guide us collectively as we focus on the actions set out in this plan.

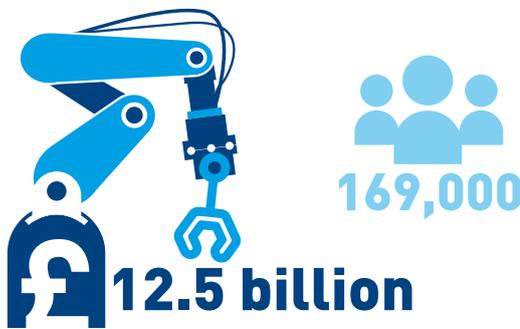
Scottish manufacturing in numbers



16 Scottish firms are manufacturing PPE and hand sanitiser, helping to tackle the Covid pandemic **and** creating jobs



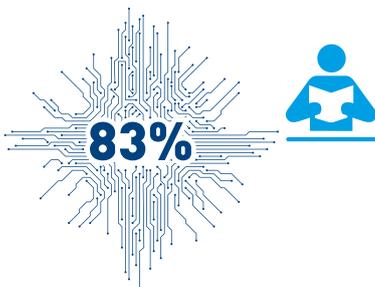
Manufacturing exports were worth **£30 billion** and accounted for **61%** of trade with EU¹



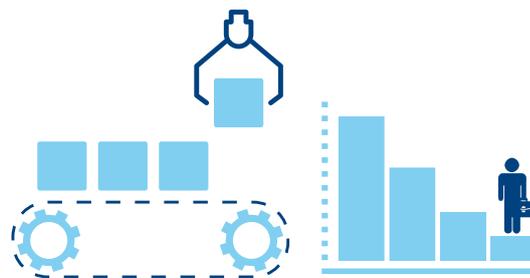
Manufacturing was worth **£12.5 billion** in GVA to the economy¹ and employed **169,000** people²



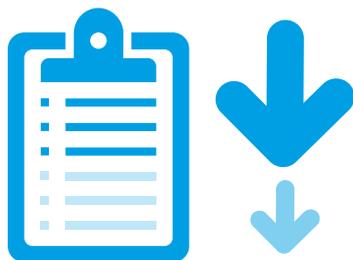
Manufacturing output contracted by **23.1%** over the last year³



83% of manufacturing businesses applied to the furlough scheme



Manufacturing businesses across UK expect sales, investment and employment to all decrease over each of the next four quarters



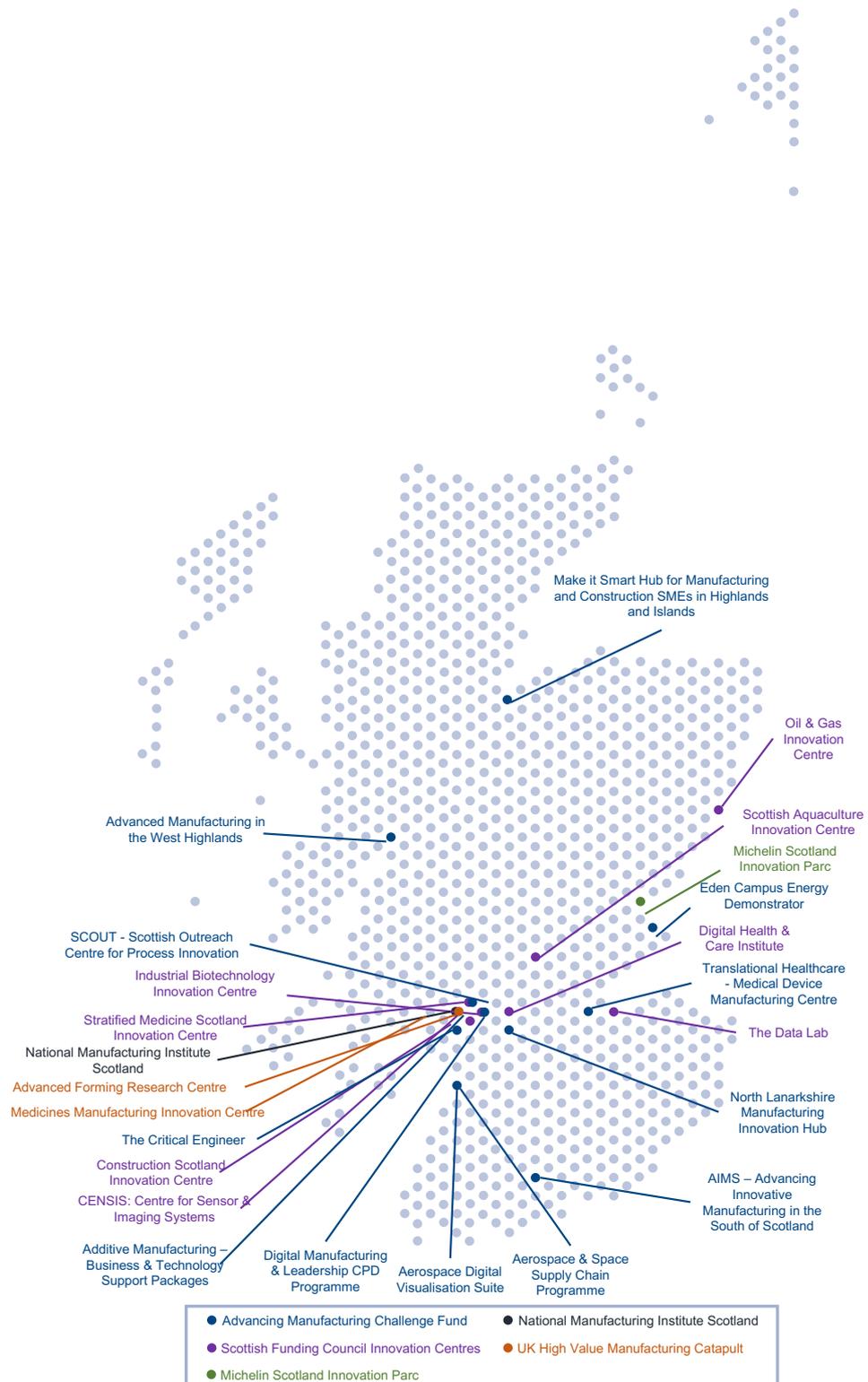
Nearly half (47%) of all manufacturing businesses have reported a decrease in turnover as a result of Covid-19⁴

- Notes:
- 1. 2018 figures
 - 2. 2019 figures
 - 3. 2019 Q2 vs 2020 Q2
 - 4. Expected turnover vs actual turnover.

Sources: Scottish Government Quarterly GDP Index; Business Register and Employment Survey; Scottish Annual Business Statistics; Export Statistics Scotland; ONS Business Impacts of Coronavirus Survey (BICS) update for Wave 15 (5 and 18 Oct) published on 30 Oct 2020; Scotland level results. The manufacturing sector is defined by the Standard Industrial Classification (SIC 2007) section C. Bank of England: Monthly Decision Maker Panel data (Sept 2020).

Scotland's manufacturing support infrastructure

A large network of support is available to manufacturing companies across Scotland, including those illustrated here.



Priority areas and identified actions

Making Scotland's Future: A Recovery Plan For Manufacturing has been developed by sub-groups focusing on four priority areas:

1. **Collaboration and networks** – promoting collaboration across the sector in Scotland and beyond to maximise sales, particularly exports, and building networks to support the sharing of knowledge, ideas, capability and best practice.
2. **Supply chains and competitiveness** – supporting businesses of all sizes to develop stronger and new supply chains and to access new opportunities.
3. **Adaptation and transformation** – identifying transformative solutions that enable the sector to be more resilient, productive, digitally-enabled, sustainable and competitive, and to become truly world-class.
4. **Skills and workforce** – in line with Fair Work and Just Transition principles, enhancing workforce development to respond to the emergence of new technologies, whilst safeguarding and creating high-quality, green jobs.

The sub-groups have brought together expertise from the public and private sectors (a full list of those involved is at Annex 1) and identified actions to be taken forward by the end of 2021.



Paul Sheerin, Chief Executive, Scottish Engineering

“The scale and speed of the downturn this global pandemic has brought to our economy has been startling, and Scotland’s engineering manufacturing sector has been no different in experiencing the impact as demand fell and international supply chains ground to a halt overnight. A challenge of this magnitude demands a response that is ambitious, coordinated and uses all the available existing expertise whilst actively seeking new pathways to turn adversity into opportunity.

“This manufacturing recovery plan aims to fulfil that ambition by concentrating on four key pillars that the sector will recognise as critical in normal times, and even more so in our current challenging situation. By focusing and coordinating Scotland’s excellent matrix of support organisations, and working in partnership with industry, the actions of this plan will enable manufacturers to do what they do best: adapt, transform and continuously improve to ensure sustainable recovery of a sector that is critical to Scotland’s economic wellbeing.”

1 Collaboration and networks

Pulling together as one modern, dynamic and integrated manufacturing community is crucial to building our capability here in Scotland as well as being more outwardly focused on new sources of business, innovation and investment. Partnerships and collaborations are an increasingly important way of effecting change with greater ease and speed.

We need to promote collaboration across the sector in Scotland and beyond, build networks to support the sharing of knowledge, ideas, capability and best practice, and connect companies with strong propositions into relevant investment networks. This requires mechanisms for faster, better, digitally-led exchanges across industry with appropriate support from the public sector and academia. The goal is to form clusters around the best opportunities for Scottish manufacturing and stronger supply chain competitiveness.

While collaborative and open innovation often delivers cutting-edge research and development, there are many other ways companies can work together, for example by sharing equipment, facilities, contacts and expertise. This is particularly important for smaller companies.

Collaboration is also critical to our low carbon ambitions. The net zero manufacturing we are working towards requires upfront capital investment to upgrade premises and equipment over time but costs can be reduced through clustering and economies of scale.

This is a great opportunity to attract investment into Scotland. To bridge this gap, companies are working to develop better-evidenced business cases and investors are deepening their understanding of the manufacturing industry so they can accurately appraise the risks and opportunities over the long-term. There is also an opportunity to work collaboratively to promote Scottish low carbon strengths, including through our trade and investment levers and raising Scotland's profile at international events including COP26 in November 2021.



Linda Hanna, Interim CEO, Scottish Enterprise

“The recovery plan for manufacturing brings together industry, the public sector and academia to focus on future skills, transformation and growth, and goes beyond recovery to lead a manufacturing renaissance that is sustainable in every sense.

“The adaptability of the industry was clear to see as it rose to the challenges of COVID-19 by changing working practices, producing PPE and maintaining essential supplies, highlighting just how resilient the sector is.

“What is important is that Scotland has an outward and forward-looking, innovative manufacturing sector. A sector where collaboration and talent are key, where there are future trade, investment and supply chain opportunities, and where manufacturing and the valuable jobs it supports are at the heart of the Scottish economy.”

Immediate Actions:

- Develop a manufacturing 'network of networks' to pool and coordinate the resources of the variety of public and private networks already in operation. As well as improving impact and alignment during a time of rapid change, it will help to raise awareness of Scottish manufacturing and help with the development of new relationships between the Scottish manufacturing community and other UK and international stakeholders.
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Proposed Actions:

- Build a programme of activity designed to stimulate demand for investment in manufacturing small and medium-sized enterprises (SMEs) through the development of stronger business cases. This will involve a Manufacturing Investment Forum for bringing the manufacturing and investment communities together. It will also involve the more widespread promotion of tools and resources available to help SMEs win external funding.
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- Develop a manufacturing start up accelerator facility in Scotland drawing on international best practice and linking with Scotland's wider entrepreneurial system. This will cater for the fact that manufacturing companies can have significant early stage capital investment requirements.
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- Build a programme of activity to increase the use of external funding by Scottish manufacturing, including City and Growth Deals, UK Sector Deals, UK Industrial Strategy funds and other competitions. This will involve shaping and raising awareness of new opportunities at the UK level, increasing participation from industry in Scotland and influencing the success of bids.
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- Promote collaboration between companies around sharing resources, costs and risks, including bidding jointly for contracts, sharing facilities and equipment, and joint approaches to exporting and marketing. This will involve the consideration of cooperative business models.
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- Build a programme of international collaborations, leading to increased levels of manufacturing-related research funding and international trade and investment.
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Case Study



Japan-Scotland partnership delivers £20m investment in subsea innovation

Subsea is an area where Scotland has developed a world-class capability, driven by the needs of the North Sea oil and gas industry.

As the North Sea fields decline, the Scottish subsea industry is increasingly looking to international markets for growth.

Recognising this, Scottish Enterprise and Subsea UK developed a strong relationship with key subsea actors in Japan and developed the Japan-Scotland Subsea Partnership.

Over £20 million is being invested in collaborative innovation projects which will help both Scottish and Japanese companies to work and grow together in the coming years.

Twelve Scottish businesses from Aberdeen, Inverness, Edinburgh, Coatbridge and Livingston will partner with Japanese firms on six projects.

These include: an £8.3 million project to develop an offshore and subsea 'internet of things' infrastructure; and a £3.3 million venture to build a digital system which monitors floating structures.

Mitsuyuki Unno, Executive Director of the Nippon Foundation, which ran a competitive research and development fund with Scottish Enterprise, said:

“These projects will promote multisectoral collaboration, global partnerships and develop the new ocean development market.”

2 Supply chains and competitiveness

When global supply chains were disrupted in March 2020, businesses and governments realised the risks of decades of increasing supply chain complexity and disaggregation. Disruption of international trade flows, combined with the availability of low-cost digital technology, the low carbon agenda and the fact that highly-productive manufacturing sectors drive economic productivity, have created a compelling rationale to revitalise Scottish supply chains.

'Industry 4.0' – the utilisation of automated processes – is revolutionising manufacturing and location decisions. The traditional wisdom of moving production to low-cost economies as a way of improving productivity is becoming less valid and the use of adaptable, affordable, automated solutions is reversing years of horizontal integration. The price of labour continues to increase as the living standards in these low-cost economies rise. In addition to this, larger inventories, unresponsive lead times and the environmental impacts from transportation emissions, are also diminishing the perceived productivity gains from 'offshoring'.

In the last decade, manufacturing has transformed from a business model of low cost and low value. Through the application of leading-edge technical knowledge and expertise to create products, production processes and associated services, manufacturing is now considered a strong contributor to sustainable growth and of high economic value.

During this time many advanced economies shifted their focus to developing high value manufacturing sectors to create the products of the future in areas such as: low carbon transport; health and extended living; the circular economy; and smart data-driven products. As demand for these products in global markets grows, Scotland could be well placed to compete as well as attract inward investment – a priority in the [Inward Investment Plan](#).

As supply chains regroup and businesses 'build back better', putting in place a resilient business model will be key to recovery. Evidence suggests that, broadly speaking, businesses that prior to COVID-19 adopted digital technology or invested in new machinery and in their people, have weathered the storm comparatively better. By innovating and collaborating with supply chain partners they are better placed to take advantage of this new future, particularly given the expected adverse consequences of the UK's exit from the EU.

For businesses that have yet to make the adoption leap, the time is now. Scotland has a network of technology and innovation centres, including the National Manufacturing Institute Scotland (NMIS), that can de-risk the next vital investment decision in productive technology.

This is the moment for business to reassess their supply chain proposition and to plan for the new orthodoxy.

Immediate Actions

- Deliver an engagement programme for manufacturing companies to maximise opportunities and increase Scottish content, helping businesses boost resilience and access new or existing supply chains in priority sectors.
- Increase the economic impact of public sector procurement, by combining our knowledge and understanding of the market. Identify and help equip new and existing Scottish supply chains to anticipate and respond to public sector demand.
- Support inward investors to identify opportunities for Scottish manufacturers that are created by new and emerging supply chains to bring more business to Scotland.
- Deliver webinars and provide remote support tools on business improvement, technology adoption and upskilling to ensure manufacturers stay competitive now and in the future.
- Promote a supply chain excellence programme of recognised best practice models to develop a culture of performance and innovation across Scottish manufacturing businesses.



James Withers, Chief Executive of Scotland Food and Drink

“Scotland’s entrepreneurial and innovative food and drink manufacturers are the lifeblood of our industry and make our sector truly world-leading.

“Our industry has been hit hard by Covid-19, with around £3 billion of sales lost. However, the pandemic has also shown the importance of resilience, innovation and collaboration. Our manufacturers have worked tirelessly to ensure the food and drink supply chain has kept moving, whilst at the same time protecting their workforce and changing their routes to market.

“We are at a crucial juncture for Scotland’s economy. We have to chart a recovery from a pandemic and navigate Brexit. The themes of innovation and collaboration have never been more important. They lie at the heart of the manufacturing recovery plan and define how our sector will move forward in playing a central role in driving a smart recovery for Scotland’s economy and communities.”

Case Study

How Scottish manufacturers responded to PPE demand

COVID-19 created opportunities to develop new supply chains as a result of increased global demand for vital personal protective equipment (PPE).

Contracts between NHS Scotland and several companies located in Scotland helped strengthen and expand the supply of protective gowns, securing long-term stock levels. NHS Scotland established an entirely new supply chain, from start to finish, within the space of a month during the spring of 2020.

Forfar-based Don & Low played an essential role in a collaboration to manufacture gowns. This was made possible by the strong partnership the company has with its workforce and employee representatives, underlining the benefits of fair work practices, which have never been more important than during these challenging times.

Don & Low supplied around 2.8 million square metres of the base material which was then converted into around one million non-sterile gowns by Keela and Redwood TTM, based in Glenrothes and Wigan respectively. Keela also worked with manufacturers Transcal and Endura, both based in Livingston, to deliver these Scottish supplies.

Keela and Redwood each ramped up production to a combined output of 40,000 gowns per week which represented over 50% of NHS Scotland's weekly requirement of 70,000 gowns during summer 2020.

Collaborative working between NHS Scotland, Scottish Enterprise and the Scottish Government made possible this new supply chain for gowns. In particular, Scottish Enterprise's Scottish Manufacturing Advisory Service (SMAS) worked closely with both Don & Low, and the converters, to establish garment specification requirements and required production schedules.

The new supply chain formed part of the Scottish Government's two-pronged 'make and buy' strategy, fulfilling the priority of establishing a supply chain for gown production in Scotland. Gowns for NHS Scotland can now be produced and supplied in Scotland through this established chain, with the potential to add more Scottish suppliers if required.

Prior to COVID-19, all PPE sourced by NHS Scotland came from manufacturers outside of Scotland. Between March and August 2020, this began to shift as production was established in Scotland and the rest of the UK, and existing capabilities increased capacity. Between October 2020 and March 2021, the balance will shift again, with nearly half of all PPE being supplied from Scotland. When gloves are removed from the count, over 90% of PPE required by NHS Scotland is manufactured in Scotland.

3 Adaptation and transformation

Transformative solutions that enable manufacturing to become more resilient, productive, digitally-enabled, sustainable and competitive will help companies not only recover to their pre-COVID-19 state but, in the longer-term, to thrive in a post-COVID-19, post-Brexit, net zero economy, and put the sector on the path to being truly world-class.

The biggest opportunities lie in the adoption of digital and data-led solutions (sometimes referred to as 'Industry 4.0') that speed up, simplify and automate processes and in low carbon practices that are embedded across product lifecycles and can save costs by enabling resource and energy efficiencies. Innovative business models have been proven to result in new sources of revenue.

Scottish manufacturing has a strong mix of large, including some global, companies and of SMEs. However, SMEs account for a significant part of the mix – 97% of companies have fewer than 100 employees – so transformative solutions must be applicable to this community and need to be achievable if they are to be adopted on a large scale.

Immediate Actions

- Roll-out a digital adoption campaign to communicate the benefits of digital transformation and offer real-life examples of companies that have successfully adapted processes. Case studies and evidence from existing digital adoption/development loans and grants should be used to help businesses see the potential benefits of integration.
- Use the Low Carbon Manufacturing Challenge Fund, Scottish Industrial Energy Transformation Fund, Green Jobs Fund and relevant UK funds to drive collaborative development across supply chains of new manufacturing processes and technologies which support the transition to a circular, net zero economy.

Proposed Actions

- Any Scottish company looking for public sector assistance for digital transformation should be accredited to a minimum standard of Cyber Essentials (as outlined in Scottish Government [guidance](#)) to protect themselves against common online security threats by no later than 31 March 2022.
- Align support mechanisms such as the Digital Development Loan, that enable companies to pilot and then implement capital modernisation solutions, for e.g. automation and robotics.
- Build on expertise gained through existing Scottish clusters, such as the Scottish manufacture of PPE, and develop new clusters. The focus should be on building and onshoring new supply chains and encouraging clusters to undertake collaborative environmental and digital transformations.



John Reid, CEO, National Manufacturing Institute Scotland

“The manufacturing sector in Scotland has rarely, if ever, faced such a profound degree of uncertainty and disruption. The COVID-19 pandemic, Brexit and the challenge of transforming to face the climate emergency have created an extreme environment. Like all points of adversity or crisis this one comes with significant threats but at the same time huge opportunities.

“This is a critical moment for manufacturing in Scotland. We all – government, agencies, academia, innovation centres and companies – need to be bold, decisive and innovative if we are to develop the resilience to deal with these threats and maximise the potential of the opportunities. The way we used to do things won’t be good enough or fast enough.

“This recovery plan lays out a series of clear, focused, ambitious actions and goals. They offer an unprecedented level of coordinated thinking and support for manufacturers. Making them happen will deliver a step change transformation that will not only get us through the crisis but will build a bigger, stronger and more sustainable manufacturing sector into the future.

“It represents ‘Team Scotland’ at its best by showcasing a determination to be innovative, a capability to be agile and the leadership to make things happen.”

Case Study



The world's first 100% electric fire engine – made in Scotland

A Scottish manufacturer has produced the world's first battery-powered electric fire engine.

Launched in October 2020, the new fire engine has been developed by Emergency One, the UK's leading manufacturer of fire, rescue and emergency vehicles, and uses battery power for both its engine and water hose pump.

Established in 1989, Emergency One employs around 210 staff with the majority based at its factory in Cumnock, Ayrshire.

There are currently no other electric fire engines available anywhere in the world, with this new vehicle a direct result of significant innovation work by Emergency One.

Scottish Enterprise's innovation teams worked closely with the company to develop the project and awarded a £500,000 R&D grant in 2019 as a contribution towards the company's £1.7m R&D investment in the new vehicle development.

This new zero carbon vehicle demonstrates the innovation and market agility that Scottish manufacturers are renowned for globally.

Emergency One has brought a 'first in class' product to market during a global pandemic, capitalising on the growing appetite for lower carbon public services as countries around the world seek a green recovery from COVID-19.

4 Skills and workforce

COVID-19 has disrupted the economy in many different ways: placing strains on business continuity through the disruption of supplies and supply chain relationships; distorting traditional demand for products; and creating levels of uncertainty which in resource planning terms has had a significant impact on workforce planning and the wider labour market.

While the Coronavirus Job Retention Scheme has supported the wages of many employees on furlough, the environment for employers to navigate remains challenging. Traditional recruitment methods, travel to work patterns, safe physical distancing in the workplace, and training and development methods have all had to adjust to the new dynamic environment created to cope with the pandemic.

And yet we know that as recovery gains momentum the pressures that existed within the labour market pre-COVID-19 will resurface, with skills shortages exacerbated by redundancies and restrictions on skilled labour from the European Union and by the need to recruit or reskill workforces to deliver a just transition to net zero.

Some sectors and their associated supply chains such as aerospace and oil and gas have been disproportionately impacted by current economic conditions. These sectors will require targeted support measures to help displaced workers to reskill, or to put their highly transferable skills to use in other sectors and other parts of Scotland, and secure alternative employment. This workforce and its expertise are fundamental to meeting Scotland's ambitious climate change targets and ensuring people are supported to benefit from the transition to net zero, whilst protecting those at risk in the transition.

We need to respond to these factors now and in the future. In the short-term, we need to ensure that employers are fair and mitigate potential detrimental behaviour. In the medium to long-term we need to provide a platform for strong and confident recovery through the provision of agile and effective labour market interventions. We need to harness our available resources and provide confidence to increase investment in recruitment and workforce development that will aid recovery and strengthen organisational resilience. We will work in collaboration with businesses to support workforce skilling and training as part of a just transition to a more resilient sector.

Immediate Actions

- Encourage employers to utilise the range of available incentives to retain, adopt and recruit apprentices, to mitigate the current disruption, maintain a robust future skills pipeline and promote progressive Fair Work practices across the manufacturing sector.
- Adapt existing and develop new learning models to address the hiatus in traditional recruitment channels, for e.g. Apprenticeship Pathways and Host Employer Models.
- Work with partners to develop a strategic support programme for sectors adversely impacted by the pandemic, to support displaced workers and to maximise and enhance their existing skillsets for jobs in growth sectors.
- Work collaboratively within the 'One Scotland Team' to inform the skills priorities for the Climate Emergency Skills Action Plan (CESAP).

Proposed Actions

- Through NMIS and the Manufacturing Skills Academy provide innovative and agile skills interventions to enable employers to respond to the emerging needs of new technologies and workplace practices, supporting businesses and creating higher skills provision for individuals.
- Develop a skills partnership programme to support regional and cluster development and promote collaborative models of workforce and leadership. This should also develop and foster agile communities of practice to support Fair Work and deliver future skills requirements.
- Establish fast-track employment models to address emerging skill shortages and jobs growth.
- Initiate actions to mitigate the debilitating impact of graduate unemployment, creating meaningful work experience, education, training and employment opportunities across the manufacturing sector to optimise graduate talent.
- In partnership, develop learning experiences to promote and enhance commercial awareness, foster enterprising behaviours and encourage progressive leadership practice within our manufacturing sector.

Case Study



The appliance of science gives Borders employment a boost

Kelso-based Scotmas has taken on ten modern apprenticeships to support its business growth and boost local employment.

The disinfection specialists received a grant from South of Scotland Enterprise through the Pivotal Enterprise Resilience Fund in the summer of 2020 which allowed the firm to retool and adapt their business to supply the growing demands for high-level disinfectants.

As a result, ten additional jobs were created within the company – all of which were filled by local people recently made redundant.

Scotmas is working with Forth Valley College to place all the new-starts on a two-year Modern Apprenticeship in Scientific, Technical and Formulation Technology. The qualification – developed with support from Skills Development Scotland and in partnership with industry – allows new employees to develop specialist skills and knowledge, whilst at the same time gaining vital in-work experience.

The apprentices will benefit from using new remote learning tools and a bespoke training suite with full videoconferencing and digital connectivity capabilities, thanks to recent investments made by the company.

Alistair Cameron, CEO at Scotmas, said:

“Thanks to the latest technology, we have been able to partner with Forth Valley College to deliver world-class, SQA-accredited training to our staff entirely on-site.

“The commitment shown by our workforce – especially in the last six months to meet the demands from customers such as the NHS and social care providers – has been first class. At Scotmas we have a responsibility to ensure that they have access to opportunities to upskill and develop their careers.

“The support from South of Scotland Enterprise and partners has been key in helping us adapt and retool our business and create these new jobs at a crucial time for the South of Scotland economy.”

Next steps

In its [response to the recommendations of the Advisory Group on Economic Recovery](#), the Scottish Government pledged to work in partnership with others to co-produce sector recovery plans.

Making Scotland's Future: A Recovery Plan For Manufacturing brings together a partnership of industry, academia and the public sector to propose a range of actions over the next 12 months that will support the manufacturing sector's recovery.

The suite of actions summarised below focus on identifying opportunities for both recovery and growth, and complement the range of business support measures that have already been made available to help deliver long-term sustainability for the Scottish sector. This includes the Aerospace Response Group which has brought together partners and stakeholders with the aim of preserving Scotland's aerospace manufacturing and research and development capability and safeguarding jobs.

Work has begun on the Immediate Actions. We are now seeking rapid input from industry and other stakeholders on the Proposed Actions with a final plan and list of actions due to be published in March 2021.

Comments on the Proposed Actions, referencing the relevant Action Code(s), should be sent via email to MIDAMP@gov.scot or via the Scottish Government's [consultation platform](#) by 12 February 2021.

Immediate Actions

- Develop a manufacturing 'network of networks' to pool and coordinate the resources of the variety of public and private networks already in operation. As well as improving impact and alignment during a time of rapid change, it will help to raise awareness of Scottish manufacturing and help with the development of new relationships between the Scottish manufacturing community and other UK and international stakeholders. [Action Code CN1]
- Deliver an engagement programme for manufacturing companies to maximise opportunities to increase Scottish content, helping businesses boost resilience and access new or existing supply chains in priority sectors. [Action Code SCC1]
- Increase the economic impact of public sector procurement, by combining our knowledge and understanding of the market to identify and help equip new and existing Scottish supply chains to anticipate and respond to public sector demand. [Action Code SCC2]

- Support inward investors to help identify opportunities for Scottish manufacturers created by new and emerging supply chains to bring more business to Scotland. [Action Code SCC3]

- Deliver webinars and provide remote support tools on business improvement, technology adoption and upskilling to ensure manufacturers stay competitive now and in the future. [Action Code SCC4]

- Promote a supply chain excellence programme of recognised best practice models to develop a culture of performance and innovation across Scottish manufacturing businesses. [Action Code SCC5]

- Roll-out a digital adoption campaign to communicate the benefits of digital transformation and offer real-life examples of companies that have successfully adapted processes. Case studies and evidence from existing digital adoption/development loans and grants should be used to help businesses see the potential benefits of integration. [Action Code AT1]

- Use the Low Carbon Manufacturing Challenge Fund, Scottish Industrial Energy Transformation Fund, Green Jobs Fund and relevant UK funds to drive collaborative development across supply chains of new manufacturing processes and technologies which support the transition to a circular, net zero economy. [Action Code AT2]

- Encourage employers to utilise the range of available incentives to retain, adopt and recruit apprentices, to mitigate the current disruption, maintain a robust future skills pipeline and promote progressive Fair Work practices across the manufacturing sector. [Action Code SWF1]

- Adapt existing and develop new learning models to address the hiatus in traditional recruitment channels e.g. Apprenticeship Pathways and Host Employer Models. [Action Code SWF2]

- Work with partners to develop a strategic support programme for sectors adversely impacted by the pandemic, to support displaced workers and to maximise and enhance their existing skillsets for jobs in growth sectors. [Action Code SWF3]

- Work collaboratively within the 'One Scotland Team' to inform the skills priorities for the Climate Emergency Skills Action Plan (CESAP). [Action Code SWF4]

Proposed Actions

- Build a programme of activity designed to stimulate demand for investment in manufacturing small and medium-sized enterprises (SMEs) through the development of stronger business cases. This will involve a Manufacturing Investment Forum for bringing the manufacturing and investment communities together. It will also involve the more widespread promotion of tools and resources available to help SMEs win external funding. [Action Code CN2]
- Develop a manufacturing start up accelerator facility in Scotland drawing on international best practice and linking with Scotland's wider entrepreneurial system. This will cater for the fact that manufacturing companies can have significant early stage capital investment requirements. [Action Code CN3]
- Build a programme of activity to increase the use of external funding by Scottish manufacturing, including City and Growth Deals, UK Sector Deals, UK Industrial Strategy funds and other competitions. This will involve shaping and raising awareness of new opportunities at the UK level, increasing participation from industry in Scotland and influencing the success of bids. [Action Code CN4]
- Promote collaboration between companies around sharing resources, costs and risks, including bidding jointly for contracts, sharing facilities and equipment, and joint approaches to exporting and marketing. This will involve the consideration of cooperative business models. [Action Code CN5]
- Build a programme of international collaborations, leading to increased levels of manufacturing-related research funding and international trade and investment. [Action Code CN6]
- Any Scottish company looking for public sector assistance for digital transformation should be accredited to a minimum standard of Cyber Essentials (as outlined in Scottish Government [guidance](#)) to protect themselves against common online security threats by no later than 31 March 2022. [Action Code AT3]
- Align support mechanisms such as the Digital Development Loan, that enable companies to pilot and then implement capital modernisation solutions such as automation and robotics. [Action Code AT4]

- Build on expertise gained through existing Scottish clusters, such as the Scottish manufacture of PPE, and develop new clusters. The focus should be on building and onshoring new supply chains and encouraging clusters to undertake collaborative environmental and digital transformations. [Action Code AT5]
- Through NMIS and the Manufacturing Skills Academy provide innovative and agile skills interventions to enable employers to respond to the emerging needs of new technologies and workplace practices, supporting businesses and creating higher skills provision for individuals. [Action Code SWF5]
- Develop a skills partnership programme to support regional and cluster development, to promote collaborative models of workforce and leadership, and to develop and foster agile communities of practice to support Fair Work and deliver future skills requirements. [Action Code SWF6]
- Establish fast-track employment models to address emerging skill shortages and jobs growth. [Action Code SWF7]
- Initiate actions to mitigate the debilitating impact of graduate unemployment, creating meaningful work experience, education, training and employment opportunities across the manufacturing sector to optimise graduate talent. [Action Code SWF8]
- In partnership, develop learning experiences to promote and enhance commercial awareness, foster enterprising behaviours and encourage progressive leadership practice within our manufacturing sector. [Action Code SWF9]

A Making Scotland's Future Programme Board governs this work and its ongoing development, and will monitor progress against the actions over the delivery phase (until December 2021).

Annex 1

Priority areas – sub-group membership

Collaboration and networks

- David Leven, Scottish Enterprise (Lead)
- Alistair Longmuir, Lifescan (Industry Co-lead)
- Steven Halliday, Rolls-Royce (Industry Co-lead)
- Caroline Cantley, Scottish Research Partnership in Engineering (SRPe)
- Karen Craig-Hunter, Scottish Enterprise
- Andrew Henderson, Scottish Enterprise
- Scott McClelland, Scottish Government
- Lynne O'Hare, National Manufacturing Institute Scotland operated by the University of Strathclyde
- Arthur Rennie, South of Scotland Enterprise
- Mark Western, Scottish Enterprise

Supply chains and competitiveness

- Nick Shields, Scottish Enterprise (Lead)
- Andrew Gallagher, Murray & Wright Ltd (Industry Co-lead)
- Ken Moran, Guala Closures (Industry Co-lead)
- Ian Collinson, Scottish Enterprise
- Benoit Fernandez, National Manufacturing Institute Scotland operated by the University of Strathclyde
- Andy McLaughlin, Scottish Enterprise
- Jillian Moffat, Scottish Enterprise
- Dermot Rhatigan, Scottish Government
- Stuart Thomson, South of Scotland Enterprise
- Morag Watt, Scottish Government
- Remi Zante, National Manufacturing Institute Scotland operated by the University of Strathclyde

Adaptation and transformation

- Paul Winstanley, CENSIS – Centre for sensing, imaging systems and IOT (Lead)
- Robert Orr, Howden Compressors (Industry Co-lead)
- Mark Atherton, Superglass (Industry Co-lead)
- Scott Bradley, Scottish Government
- Chris Dungey, National Manufacturing Institute Scotland operated by the University of Strathclyde
- Steven Hutcheon, Highlands and Islands Enterprise
- Sarah Jardine, National Manufacturing Institute Scotland operated by the University of Strathclyde
- Shrawan Jha, CENSIS – Centre for sensing, imaging systems and IOT
- David McIntosh, Scottish Futures Trust
- Nick Young, Scottish Government

Skills and workforce

- Gordon McGuinness, Skills Development Scotland (Lead)
- Selma Hunter, Chair of Engineering Skills Leadership Group (Industry Co-lead)
- Sylvia Halkerston (Industry Co-lead)
- Brian Boyle, East Kilbride & District Engineering Group Training Association Ltd
- Allan Colquhoun, Leonardo
- Mary Jane Connelly, Scottish Government
- Callum Grigor, Scottish Government
- Jim Hannigan, National Manufacturing Institute Scotland operated by the University of Strathclyde
- Stewart McKinlay, National Manufacturing Institute Scotland operated by the University of Strathclyde
- Eileen Russell, Ricardo Rail
- William Scott, Skills Development Scotland
- Paul Sheerin, Scottish Engineering

Annex 2

Progress on *A Manufacturing Future for Scotland*

In 2016, the *Manufacturing Action Plan: A Manufacturing Future for Scotland* was published setting out how the Scottish Government would work with industry, the enterprise agencies and other key stakeholders to increase investment, innovation and productivity in the sector. Since then considerable progress has been achieved, creating the foundations on which *Making Scotland's Future: A Recovery Plan For Manufacturing* will build. This includes:

- The National Manufacturing Institute Scotland (NMIS), based at the new Advanced Manufacturing Innovation District Scotland (AMIDS) at Netherton Farm, Renfrewshire.
- The opening of a Lightweight Manufacturing Centre as a part of the NMIS Group.
- The Medicines Manufacturing Innovation Centre (MMIC) which will be based next to NMIS, launched by Scottish Enterprise and Innovate UK, in partnership with the University of Strathclyde, the Centre for Process Innovation and two major UK pharmaceutical companies (GSK and AstraZeneca).
- The launch of the Advancing Manufacturing Challenge Fund with up to £15.8 million being invested in 12 innovation projects over the next three years.
- Manufacturing best practice visits (the 'smart excellence programme') for over 300 leaders.
- A review of the Skills Investment Plans by Skills Development Scotland and the development of a new skills plan as part of NMIS.
- An enhanced Circular Economy Support Service from Zero Waste Scotland.
- An advice and support service for energy-intensive manufacturers.
- Capital asset reviews for over 550 manufacturers.
- A 'supply chain experts programme' was piloted over a two-year period and is now being used to inform a new service offering from the Scottish Manufacturing Advisory Service (SMAS).
- 180 'Industry 4.0' audits carried out by SMAS.



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