



*The Royal Society  
of Edinburgh*

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Dear members of the Economy and Fair Work Committee,

### **Scotland's Supply Chain: A Response from the Royal Society of Edinburgh**

1. The RSE welcomes the opportunity to respond to this call for views on Scotland's Supply Chain. Whilst we are not positioned to comment on the experiences of individual businesses, this response reflects on high-level supply chain issues and the themes of People, Places, and Products through the lens of resilience. As such, this response has been informed by the work of the RSE Post-Covid-19 Futures Commission (PCFC), which was established to support Scotland's long-term recovery from the COVID-19 pandemic. The Commission has engaged with a wide range of businesses, organisations, and people across Scotland and further afield, including those with direct experience of supply side problems, in developing its key learnings. These learnings have recently been published, and cover four key workstreams, (1) Data, Evidence and Science (2) Public Debate and Participation (3) Building National Resilience (4) Inclusive Public Service.<sup>1</sup> The findings of the Building National Resilience workstream are of particular relevance to the Committee's inquiry and underpin this response.
2. In the context of supply chains, resilience is created by (1) businesses with diversity embedded into their business model, including diversity of talent and leadership, its markets, income streams, and supply chains (2) connectivity between distribution lines (3) spare capacity built into supply chain systems (4) a forward-thinking, proactive planning approach which anticipates disruption.
3. The COVID-19 pandemic has illustrated the fragility of just-in-time supply chains and lack of investment in stock reserves in the UK. In response, sustainable and diverse supply chains must be developed to enable businesses and public sector organisations to make better use of local suppliers and networks, and overcome issues such as bottlenecks and supply chain vulnerability created by a relatively small number of entry points. This looks to be particularly appropriate in the post-Brexit era.

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<sup>1</sup> For further information see: Royal Society of Edinburgh (2021) *Coming out of Covid-19: Reimagining Scotland*. [online] Available at: <https://www.rsecovidcommission.org.uk/coming-out-of-covid-19-reimagining-scotland/>.



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4. There will at times be a trade-off between efficiency and resilience in supply chain management. For example, just-in-time supply chains are highly efficient because they maximise flows while limiting use of capital reserves. In many of these systems, the market is designed specifically to drive up efficiency through competition and this is apparent within many critical markets, such as energy. These kinds of markets are aimed at minimising the price paid by consumers or reducing the costs of public service, but they have not necessarily been designed with a policy of resilience in mind. If we want a greater focus on resilient systems, then we will need to take more account of the trade-off between efficiency and resilience. If, as seems likely, this trade-off is unavoidable in many sectors of the economy, then building a resilient nation will be more complex than the simple chase for efficiency.<sup>2</sup>
5. Given Scotland's ambitions to reduce dependency on fossil fuels and become carbon neutral by 2045, the construction of renewable and low carbon energy infrastructure must go hand-in-hand with the development of local supply chains for operation and maintenance (O&M) services to provide Scotland with a higher value and more sustainable source of economic benefit. This is fundamental to the delivery of a *Just Transition*. One possibility would be for whole life carbon costs to be made a mandatory consideration during the assessment of project tenders, which tend to give some advantage to local suppliers of materials, local labour, and local added value products.
6. There is also potential to upgrade existing port infrastructure on both the east and west coasts as part of supply chain development, particularly deep-water facilities for offshore wind. If seen as a cost-effective component of building energy resilience, this could help to revitalise coastal communities that have suffered economic hardships and population loss in the wake of declines in the fishing industry. As Scotland is currently facing significant rates of depopulation among its rural and island communities, such an initiative could help to ensure these communities remain viable and encourage inward migration. COVID-19 has also exposed the reliance of many rural and island communities on tourism. Developing local supply chains could thus help to diversify and enhance the resilience of Scotland's rural economies.<sup>3</sup>
7. To facilitate a holistic understanding of Scotland's supply chains, the Scottish Government should develop a Supply Chain Management Tool and commission research into the dynamics of supply. This should be undertaken in collaboration with Higher Education Institutions, given their mathematical and modelling capabilities, and other relevant organisations to enable the identification of supply chain vulnerabilities, optimise processes, improve efficiency, and identify opportunities.
8. This type of analysis could help to improve the Scottish Government's understanding of how materials flow across its borders. Further modelling of how materials flow through entry choke points, would assist consideration of how to optimise these flows. This might be facilitated by a proactive approach which moves beyond a reliance on historical data by embracing AI and big data solutions to enable real-time decision making, reduced supply chain risk, and increased

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<sup>2</sup> For further information see: Royal Society of Edinburgh (2021) *UK National Resilience Strategy: A Response to the UK Government*. [online] Available at: <https://www.rse.org.uk/wp-content/uploads/2021/10/National-Resilience-Strategy-2.pdf>.

<sup>3</sup> For further information see: Royal Society of Edinburgh (2021) *Renewable Energy in Scotland: A Response to UK Parliament's Scottish Affairs Committee*. [online] Available at: <https://rse.org.uk/expert-advice/advice-paper/renewable-energy-in-scotland/>.



resilience. Improved understanding of these supply chain dynamics will be valuable in helping decision makers in Scotland put in place plans to address supply chain vulnerabilities and ensure that Scotland is better prepared to manage supply when disruptions occur.

9. Supply chain resilience should be further enhanced by strengthening the relationship between all levels of government and business. This could include more formal mechanisms which help local government to develop knowledge of their local economies and the businesses within them. Businesses could be encouraged to develop local procurement models, which support other local businesses and local communities by creating shorter/local supply chains to improve resilience. As part of this, the RSE is well placed to build on its existing international connections with national academies and other key institutions overseas to facilitate the sharing of learning between countries on shared challenges.
10. Scotland's supply chain must also contend with the ripple effects of Brexit and the introduction of UK Government immigration policies. It is important that Scotland is able to access and retain the range of skills required to meet current and future labour market needs. Scotland must increase investment in opportunities for lifelong learning, upskilling, and reskilling, to better match supply and demand for higher level skills. However, UK immigration policy must take account of Scotland's distinctive labour market needs, including demographic challenges, and urban-rural and socio-economic disparities. Both the Scottish and UK Governments should engage with the South of Scotland Enterprise and Highlands and Islands Enterprise in order to enhance their understanding of regional priorities and needs. The RSE would be pleased to help facilitate these discussions.
11. The findings of the RSE's Post-Covid-19 Futures Commission highlight a need to build resilience into the physical and administrative structures of society, such as supply chains, to support better horizon scanning and preparedness for future threats, develop the capacity and capability to respond to future emergencies, secure a greater understanding of the value of reserve capacity in critical areas (such as intensive care beds), and ensure there is clarity around where responsibilities and accountability for this delivery lies. To this end consideration might be given to establishing an independent Foresighting Centre, to assess future risks and preparedness, advise the Scottish Government and other relevant organisations on their effective management, and engage with citizens to increase public understanding of the complexities of supply chain management and the need to plan for resilience.
12. The RSE would be pleased to further engage with the Economy and Fair Work Committee on this topic, perhaps in the form of a roundtable or other engagement work. If this would be of interest, please contact Alfie Gaffney, Policy Advice Officer, at [agaffney@therse.org.uk](mailto:agaffney@therse.org.uk).

Yours sincerely,



Professor Jeremy Peat FRSE, RSE Vice-President of Business



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