Written submission from the IET to the Scottish Parliament COVID-19 Committee Call for Evidence on Lockdown Measures

The Institution of Engineering and Technology (IET) is an international professional body with over 160,000 members which acts as a voice for the engineering and technology professions. Spanning a range of disciplines from power systems engineering to data analytics, our primary aim is to provide a global knowledge network between business, academia, governments and professional bodies, promoting ideas which enhance the positive role of science, engineering and technology for the society and the economy of the future.

With an active membership of over 10,200, the IET has networks of volunteers in Scotland and a dedicated Engineering Policy Group Scotland (EPGS) comprising of IET members as well as representatives from other organisations. The IET has an active programme of events in Scotland which illustrate how engineering and technology can transform Scottish society in areas as diverse as: energy systems, digital transformation, healthcare technology and transport.

This response from the EPGS is intended as politically neutral submission focussing on ensuring that Scotland’s emergence from COVID-19 is driven by the principles of knowledge sharing and transparency that are at the heart of the IET’s ethos.

1. The approach being taken by the Scottish Government in its COVID-19 Framework for Decision Making;

We broadly welcome the approach set out in the COVID-19 Framework for Decision Making document published on 23rd April 2020 and its update on 5th May 2020. The principles of clear, evidence based, and collective decision making are of explicit importance to our members, innovation within the engineering and technology community thrives under these conditions. Furthermore, it is our belief that any approach must apply a rigorous system of research and peer review of any measures considered and that this process should also be transparent to the general public. We acknowledge that no single answer from science that can solve the challenges of COVID-19 and that part of the decision-making process for the Government is exercising their best judgement based on the evidence and circumstances at the time. To this end we encourage clear, honest explanations why some technology and measures have been utilised over others.

The EPGS would also like to see the Scottish Government championing resilience planning as part of the decision-making process in order to move from a reactive approach to a proactive one in mitigating the impacts of COVID-19 and future crises. We believe that this should involve, at the very least, examining the supply chains pertaining to medical and scientific interventions which are not always transparent, as well as attempting to address the technological infrastructure in Scotland which is showing itself to lag behind the rest of the UK.

As the broader social and economic impacts of COVID-19 become clearer we would also like to see a facet of the decision-making process that acknowledges the emergence of new technology, combined with widespread unemployment, presents an opportunity for retraining and redeployment of skills within the Scottish economy. It is our belief that the engineering and technology sectors can be at the
centre of the civic and economic future of Scotland and in order to accelerate these opportunities they should be reflected in the decision-making process. The EPGS has taken the decision to write to John Swinney MSP, Deputy First Minister and Fiona Hyslop MSP separately to set out our views on this matter in more detail, lest they be lost in the volume of responses to this consultation.

2. **The scope for a differentiated approach to easing current restrictions on an area by area basis across the UK and in Scotland;**

It is our assertion that any measures considered to ease the current restrictions in Scotland should be based on multi-source scientific evidence, applied honestly and transparently to each of the current constraints. By undertaking diligent research and peer reviews of the scientific material, the Scottish Government can build in scope for granularity in the reduction of the restrictions on an area by area basis, if the science supports it. The evidence review process should continue to take place within a clearly defined framework in which certain criteria are met to ensure credibility and integrity of the decisions made. We support the position that some groups will need to continue a form of shielding and would encourage the consistent review of scientific evidence to support the easing of these measures over time.

In terms of the disparity between the rest of the UK and Scotland, the Scottish Government should base its decisions on the most up to date data available for Scotland in the first instance whilst maintaining dialogue and collaboration with colleagues from the other UK nations. The fallibility of this approach lies in the reliability of the data on which the decisions are made and the EPGS encourages the Government to implement an expanded record integration system along with the ‘Test and Protect’ strategy. This will go some way to ensuring instances of infection and deaths in different care and education settings to be communicated in real time without the current data lag experiences across the UK. The current strategy adopted by all the UK Government’s is based around the reproduction, or R, value of the virus being kept below 1. In order to make the best judgement on lockdown measures for Scotland, the appropriate data sharing and collaborative infrastructure needs to be in place to ensure that the decisions are based on the most up-to-date estimations of the R value. At present the data available daily only includes positive test results, hospitalisations, ICU numbers and deaths and not instances in care homes, the community or infection transmissions in educational settings. The ‘Test and Protect’ strategy may mitigate some of this but will also require the integration of data from multiple sources, quickly and reliably daily.

As Scotland is following a different approach to testing and tracing than that adopted by the other UK nations (announced 28th May 2020) we would encourage the Government and its scientific advisors to explain the rationale behind this decision. Whether based on resources, infrastructure, regional context or other factors and, in order for the public to maintain confidence in the Government and the integrity of its decisions, the justification for this approach should be clearly communicated.

3. **How do we maintain public confidence and support in the public sector response to COVID-19 as determined by the Scottish Government whilst easing current restrictions;**

Public confidence and support for the steps taken to ease restrictions can be reinforced through clear communication by the Scottish Government on the criteria and assumptions on which the steps are based. As aforementioned, the Government should be transparent with its decision-making process and clear on the assumptions and criteria that are driving this process. Basing all the decisions made on scrutinised scientific evidence with public safety at the front and centre of all considerations will work towards assuring the public that the Government is acting responsibly and with the very best information available to them.
As aforementioned in question 2 – thorough and clear explanations of the technology being employed by the Government, as well as the approaches it does not adopt, should also form part of the messaging used to communicate with the general public. This should include referencing the scientific or best practice examples on which the technology is based and address concerns around data privacy and cyber security.

 Whilst we appreciate the constantly changing landscape that the Government is contending with, we believe that a more detailed recovery plan than the one’s currently offered will allow for further confidence in the public sector response to COVID-19. In particular the EPGS would welcome details on the role that engineering and technology will be playing in the future of Scottish society and economy. This plan should explain the reasons for the choices taken and be backed up with transparent scientific evidence as previously stated in this submission.

 At the IET we champion the benefits of advanced engineering and technology across all age ranges – from early-years children to retirees – and we adopt different messaging and communication strategies to best engage our audiences. Therefore, we encourage the Scottish Government to employ different communication channels and techniques, as well as amended messaging, to engage with all ages and sections of society – especially including young people and those from BAME communities.

 4. How should different interests in civic society and the economy be involved in the decision-making process about amending restrictions and what would enable the final decisions to be widely supported despite any necessary trade-offs that may require to be made;

 The EPGS is of the opinion that civic society and the economy need to be equipped with tools to build their resilience so they can plan for and pivot on future decisions made regarding the lockdown restrictions. A national risk register for Scotland, covering all economic and civic sectors should be created from the framework provided in the UK wide risk register – currently this only exists in the regional community risk register. Pinch points and high-level risks can then be identified and mitigated against in future decision making, allowing Scotland’s approach to be pro-active towards the future challenges that COVID-19 presents, instead of the current reactive state-of play that the UK finds itself in.

 There is an overwhelming need for oversight of all the areas of the economy and civic society that will be most greatly impacted by future lockdown decisions. This oversight should be underpinned by a response framework as guided by the national risk register. The security of these parameters will allow the Government to implement a risk mitigation strategy for specific sectors and allow for robust contingency planning both by businesses and the Government – softening the blow of any trade-offs or short-term losses. This is in keeping with our assertion that building societal and economic resilience as part of the recovery plan is of paramount importance if Scotland is going to prosper in the short-to-medium term. If this objective is communicated clearly as the decisions are amended and updated, all of society can buy into the vision for the future of Scotland and will be more likely to accept short-term hardship for long-term benefits.

 5. Could the current decision-making processes used by the Scottish Government to respond to COVID-19 be improved and if so how;

 The EPGS would like to see a greater focus on the role that engineering and technology can play in solving some of the short-term issues affecting Scotland’s recovery. For example, there is concern across the UK about routine health appointments can be undertaken going forward – we feel that tele-healthcare incorporating the remote diagnosis and treatment of on-going conditions, could play a significant role in the future of the NHS in Scotland and should be explored appropriately. Similarly,
highlighting the role of engineering and technology in the future of the economy, as part of the decision-making process, will support those feeling anxious about their future employment in a post-COVID-19 Scotland. By giving the public the confidence that the broader, medium-to-longer term societal challenges posed by COVID-19 are being considered in the short-term decision-making process will both increase support for the Government’s measures and build in resilience planning to all the decisions it takes.

6. **How robust is the current data used to inform the on-going response and are there areas where further development is required?**

It is clear to the EPGS that credible data is at the core of the COVID-19 response across the UK and, as such, our concerns going forward relate specifically to Scotland’s ability to create and utilise the infrastructure needed to manage this data requirement. The NHS in Scotland, along with its social care sector and education system, need to embrace record integration in order to allow for full visibility of the current rate of infection and reproduction (the R value). Without infrastructure integration across these sectors the Scottish Government will be hampered by fractured and outdated data collated centrally by the Scottish ONS and each individual sector. In order to make lockdown easing decisions based on up to date scientific research and knowledge the state of play in Scotland must be accurate and representative of the whole nation, otherwise the measures introduced are based on an educated, but potentially unreliable, guess.

The EPGS would like to stress that as with all aspects of infrastructure, if the technological mechanisms for collecting and collating data are updated and adapted in haste then the chances of it being done incorrectly are greatly increased. A considered appraisal of the changes that need to be made should be made and a timescale for upgrade agreed that does not rush the process and risk issues being overlooked or tackled incorrectly.

7. **How should the messaging strategy be developed by the Scottish Government as we ease parts of the current lockdown (and may potentially need to create other restrictions).**

As described in question 3, we advise that the messaging strategy adopted by the Scottish Government should be clear, robust and led by the scientific evidence on which the easing measures are based. This should include explanations as to why some technology and/or scientific guidance has been favoured over other routes. We would also welcome the continuation of clear and credible explanations for links or deviations from the other UK nations strategies.

The EPGS believes that tailored messaging for different social and economic groups, acknowledging the different challenges faces by different sections and sub-sections of Scottish society, will be incredibly important going forward as the Trace and Protect system seeks to manage localised flare ups.

Actionable, simple messaging with a clear call to action, backed up by a transparent decision-making process around the science available, will empower people to act in their best interests and for a common goal.