

# CEO'S INTRODUCTION



**The National Physical Laboratory's (NPL) number one priority during 2020 was to ensure that all our people remained safe and secure during the COVID-19 pandemic. Our focus was on prioritising our people and supporting them to navigate their working lives in a pandemic. This ensured that as the UK's National Measurement Institute (NMI), we continued to provide critical services to support the UK's infrastructure and vital healthcare provision throughout 2020.**

**COVID-19 Response** - Our work included: healthcare services to support the National Health System (NHS) and the medical supply chain industry; radiation measurements to allow the medical sterilisation industry to operate; calibrating instruments used in cancer treatment; provision of timing services on behalf of the government, for example to facilitate reliable high-speed financial trading; and provision of environmental monitoring, declared as critical by the Environment Agency.

We were also able to rapidly transfer resources to support the UK's COVID-19 response, including the government's UK Ventilator Challenge which encouraged manufacturers to re-purpose their assembly lines and support new designs to meet anticipated demand. NPL answered the challenge by designing the PocketVent, a unique, fan-based ventilator, smaller than a laptop, costing less than £1,000.

NPL used its wealth of experience and scientific capabilities to help increase the availability of Personal Protective Equipment (PPE), by signposting new manufacturers of PPE and medical devices to relevant standards and assisting with the interpretation of standards to provide clarity on the requirements for conformity.

**Measurement for Recovery** - The NPL-led Measurement for Recovery programme, was developed in 2020 to help UK companies gain access to the expertise and resource of the UK's leading measurement science experts, to help them recover and grow in the challenging economic environment resulting from the COVID-19 pandemic.

**Training and Apprenticeships** - In response to the pandemic NPL also made its catalogue of measurement related e-learning courses available free of charge, allowing industry and academia to freely invest in their workforce whilst they were 'working from home' - nearly 10,000 new learners registered for e-learning and there was a 99% satisfaction rate in the training experience. We also assisted home-schooling by making our Virtual Physics Laboratory (VPLab) educational software available for secondary school pupils and teachers; over 19,500 simulation downloads were made by students to use at home.

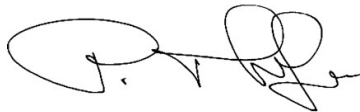
**Foresighting** - During 2020 NPL published the results of its extensive Technology and Measurement Foresighting programme, which identified major trends in technology and measurement that would impact industry and our society, as well as how we live over the next 15 years. NPL is now sharing these findings with UK Government and national measurement institutes from around the world, as well as using it to shape our future research strategy.

**National Challenges** – NPL, as the UK's NMI, is helping to address the National Challenges, with a particular focus on Advanced Manufacturing, Lifesciences and Health, Energy and Environment and Digital. The cornerstone of NPL's digital sector strategy is to embed measurement into processes using digital and data science, delivering confidence in the intelligent and effective use of data and emerging technologies.

**Our People** - To deliver all this incredible work, we need amazing people, who are supported and enabled to 'give it their all'. At NPL we have over 1,000 scientists, engineers and skilled professionals who work together to deliver exceptional science and engineering. 2020 saw awards in the Queen's Birthday and New Year Honours list to: Andy Morris, who received an MBE for his services to the Manufacturing and supply of PPE during the COVID-19 response; and Fiona Auty, who received a Medal of the Order of the British Empire (BEM), for her services to Science and Engineering Communication.

**Diversity and Inclusion** – This has remained a priority throughout 2020, with several initiatives undertaken. Alongside our work prioritising the wellbeing of a remote workforce, our key projects this year include a new two-way mentoring programme for senior leaders and individuals from underrepresented groups within NPL.

Our vision is to deliver extraordinary impact from excellent science and engineering as a world-leading and exemplary national laboratory; and during the last year, particularly given the global pandemic, our many achievements show how we are delivering on that vision.

A handwritten signature in black ink, appearing to read 'P. Thompson', with a stylized flourish at the end.

**Dr Peter Thompson FREng**  
Chief Executive Officer