Delivering a net zero NHS for a Healthier Future

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Delivering a net zero NHS for a Healthier Future - Executive Summary

SBRI Healthcare provides a mechanism to signal the challenges that the NHS and the wider system face and invites organisations to deploy innovative solutions to deliver improved outcomes of care. Our individual competition themes are scoped by working in close collaboration with Academic Health Science Network (AHSNs), frontline NHS and social care staff.

Competition 24: Delivering a Net Zero NHS for a Healthier Future is intended to accelerate the development of greener innovations towards a more sustainable healthcare system. The projects will be expected to demonstrate significant contribution to NHS carbon emission reduction through the proposed solution. The contracts awarded will be for a maximum of 12 months and between £50,000 and £100,000 (NET cost, excluding VAT) per project.

In 2023/24, the SBRI Healthcare Programme seeks to address the challenges of meeting the NHS's net zero targets while supporting net zero clinical innovation and continuing to improve care for patients. This considers the systemic complexity and the supply chain associated with all innovations proposed as well as the impact that these solutions will have on carbon emissions across the delivery of care.

Innovative solutions and approaches that will significantly support reduction in carbon emissions and have potential for implementation in the NHS are sought across three key focus areas:

1. Clinical community engagement
2. Novel business models to enable circularity in perioperative care and critical care settings
3. Net zero transformation across clinical pathways

Applicants are asked to consider the impact of their innovation on the whole system and to be aware of the competitive environment, even considering working together with other companies and organisations to bring forward solutions that can make a real difference. Health inequality is a core component of this competition, and equity of access and experience should therefore be a central pillar of any successful innovation.

SBRI Healthcare: funding competition

Programme ambitions

The SBRI Healthcare funding competition invites outstanding entrepreneurs working across frontline services and the broader system to put forward breakthrough innovations, which address clearly articulated challenges faced by the NHS and/or the social care community. The aim of the open tender is to facilitate the validation and development of such innovations and build on the value proposition required by commissioners and regulators to make purchasing or other recommendations and decisions.

Proposals should concentrate on activities which will significantly contribute to proving the technical feasibility of the proposed innovation. This competition aims to accelerate the development of greener innovations towards a more sustainable healthcare system.

Accelerated Access Collaborative's priorities

The [Accelerated Access Collaborative](#) (AAC) funds the SBRI Healthcare Programme and brings together industry, government, regulators, patients and the NHS. Its ambition is to help the NHS become stronger in supporting clinicians and patients to access new innovations at pace and scale. It does so by removing barriers and accelerating the introduction of ground-breaking innovations which will transform care and support the NHS to more quickly adopt clinically- and cost-effective innovations, to ensure patients get access to the best new treatments and technologies. Innovations include medicines, diagnostics, devices and digital products.

The AAC ensures that research and innovation meet the needs of the public, patients and the NHS. This includes ensuring that all innovations that are adopted into the NHS can support the following targets:

- Reducing health inequalities and enhancing equity of access to care through the CORE20PLUS5 initiative.

- Supporting NHS ambitions to become a net zero health service through the 'Delivering a Net Zero NHS' strategy.

CORE20PLUS5

NHS England launched the [Core20PLUS5](#) in 2021 and a bespoke [Children and young people Core20PLUS5](#) in 2022 to reduce health inequalities at both the national and system level. The approach defines a target population cohort and 5 clinical focus areas requiring accelerated improvement. The Core20 are the most deprived 20% of the national population as identified by the national index of multiple deprivation, while PLUS are population groups experiencing poorer than average health access, experience or outcomes which are not captured in the Core20 alone.

Delivering a net zero NHS

Climate change is a global health and care emergency and threatens the core purpose of the NHS – putting the health and wellbeing of the patients and communities we serve at risk now and in future. The changing climate is leading to more frequent heatwaves and extreme weather events such as flooding, and many wider impacts including the potential spread of infectious diseases to the UK. This undermines both the core determinants of good health, and the ability of the healthcare system to deliver effective care. Tackling climate change can be lifesaving, with health benefits gained through cleaner air, improved diets and active travel. For example, exposure to air pollution in the UK results in up to [36,000 deaths annually,](#) disproportionately affecting the most deprived areas of the country and so further exacerbating health inequalities.

With 1.4M staff, the NHS is the largest employer in Europe, contributing around 4.6% of the UK's emissions. The NHS is part of the challenge as well as part of the solution to this emergency. It must tackle climate change at source if it is to deliver on its core purpose: to improve health and care, now and for future generations.

In response to this challenge, in 2020, the NHS became the world's first health system to commit to reaching net zero carbon emissions, with two targets:

- To be net zero by 2040 for directly controlled emissions, with an ambition for 80% reduction by 2028–2032.
- To be net zero by 2045 for emissions that the NHS influences, with an ambition for 80% reduction by 2036–2039.

This commitment is enshrined in legislation through the Health and Care Act 2022, which places a duty on NHS organisations to consider climate change in their operations, making the NHS the first healthcare system globally to embed net zero in legislation.

Nationally-led ambition is supported across the NHS. All 212 NHS trusts in England – including more than 1,000 hospitals and healthcare facilities – now have a green plan in place which together will cut more than 1M tonnes of carbon emissions in the next three years, the equivalent of taking 520,000 cars off the road.

In line with its commitments in the '[Delivering a 'Net Zero' NHS'](#) report, the NHS is halving its contribution to poor air quality within a decade – reducing health inequalities and improving the health of communities now and in the future.

Innovation has a critical role to play in supporting the NHS in reaching its net zero commitment. New approaches and solutions are required to support decarbonisation across NHS operations and care delivery, and to enable the deep and long-term reduction in emissions required. Collaboration across different industry sectors, government, academia and other organisations is key to deliver on this ambition.

Building a greener NHS

In 2019, the carbon footprint of the NHS totalled 25 megatonnes, of which 62% was attributed to supply chains as shown in the diagram below. This clearly outlines the areas of greatest challenge as well as opportunities for change in supply chains, estates and facilities, pharmaceuticals and medical devices, as well as travel.
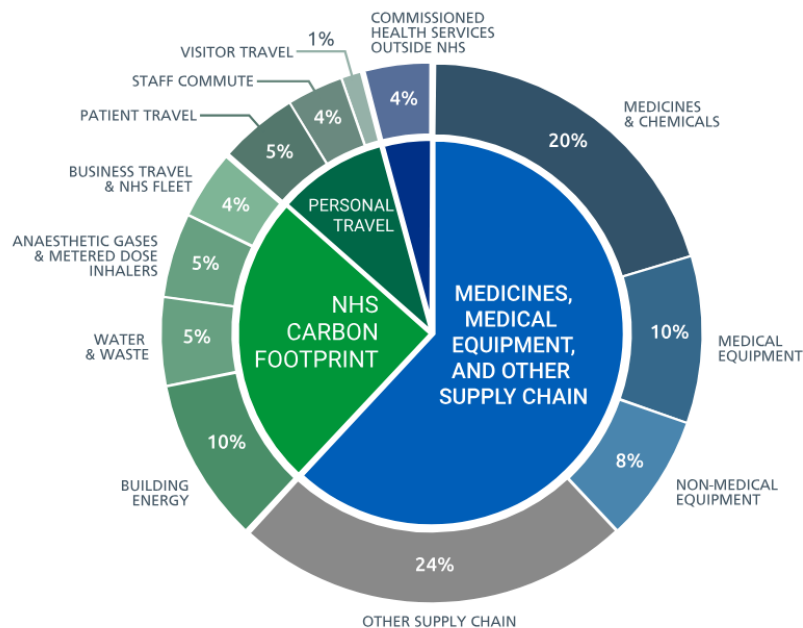
Whilst some of the greatest opportunities to reduce carbon emissions can be achieved in hospitals, the figure below clearly demonstrates that changes and actions are needed across every setting of care and care delivery.

NHS ACTIVITY TYPE
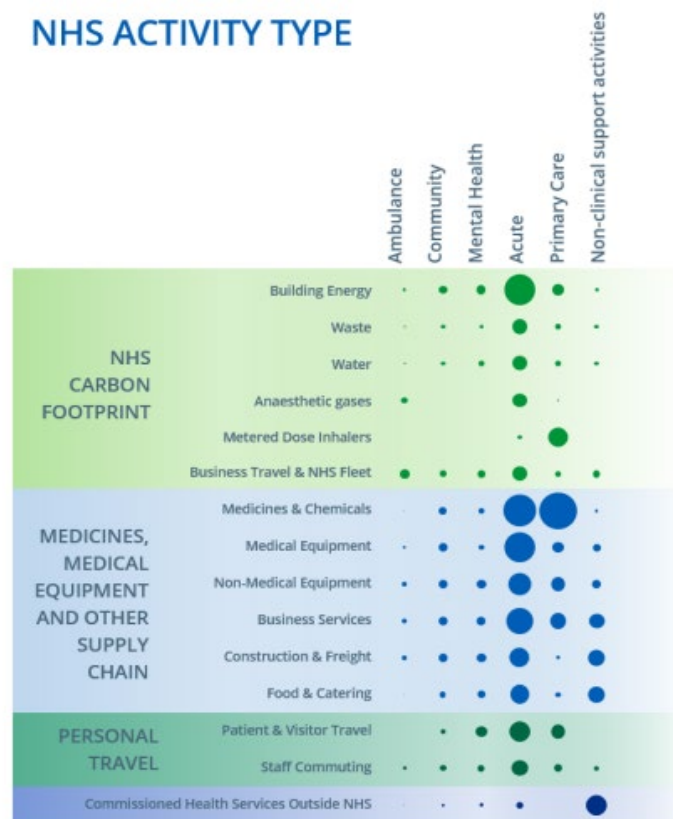
Significant steps have already been taken to reduce the NHS's impact on climate change in response to national targets. It has cut down its own carbon footprint by 62% compared to a 1990 baseline. However, contributing 4% of the nation's carbon emissions and being the largest employer in Britain, the NHS plays a critical role if the UK is to lower emissions.

The 'Delivering a 'Net Zero' NHS' report outlined initiatives to help reach these targets, which include:

- Low carbon models of care: New approaches to care delivery that embed best clinical practice to deliver the best outcomes for patients while also reducing the NHS's emissions.
- Transport and travel: Accelerating the transition of the NHS fleet to zero and low emission vehicles, incentivising staff to use electric vehicles, and increasing use of public transport and active travel (walking, cycling).
- Resource efficiency and low carbon products: Reducing waste of consumable products and switching to low-carbon alternatives where possible.
- Supply chain: Working closely with suppliers to ensure they are decarbonising their own processes, and providing clear, long-term signals about the direction of travel.
- Medicines: Reducing the use of high carbon emitting anaesthetic gases and optimising the use of inhalers or substituting with low carbon alternatives where clinically appropriate.

- Estates and facilities: Making sure new hospitals and buildings are built to be net-zero and optimising use of the retained estate.
- Training: Building awareness and understanding of climate change mitigation and adaptation into staff training and education programmes.

Progress towards a net zero NHS

Net zero supply chain

The NHS has committed to decarbonising the supply chain through more efficient use of products, low carbon substitution, and enabling innovation. This is in tandem with action to support the suppliers of the NHS to decarbonise their internal processes.

In September 2021, one year on from the publication of the 'Delivering a 'net zero' NHS' report, a clear roadmap was approved to help suppliers align with the NHS net zero ambition between now and 2030. This approach builds on UK Government procurement policy, PPN 06/20 and PPN 06/21. The milestones of the NHS net zero Supplier Roadmap are as follows:

- From April 2022: All NHS procurements will include a minimum 10% net zero and social value weighting. The net zero and social value guidance for NHS procurement teams will help unlock health-specific outcomes (building on PPN 06/20).
- From April 2023: For all contracts above £5 million per annum, the NHS will require suppliers to publish a Carbon Reduction Plan for their UK Scope 1 and 2 emissions and a subset of scope 3 emissions as a minimum (aligning with PPN 06/21). The Carbon Reduction Plan (CRP) requirements for the procurement of NHS goods, services and works guidance outline what will be required of suppliers and how it will be implemented.
- From April 2024: The NHS will extend the requirement for a Carbon Reduction Plan to cover all procurements.
- From April 2027: All suppliers will be required to publicly report targets, emissions and publish a Carbon Reduction Plan for global emissions aligned to the NHS net zero target, for all of their Scope 1, 2, and 3 emissions.
- From April 2028: New requirements will be introduced overseeing the provision of carbon footprinting for individual products supplied to the NHS. The NHS will work with suppliers and regulators to determine the scope and methodology.
- From 2030: Suppliers will only be able to qualify for NHS contracts if they can demonstrate their progress through published progress reports and continued carbon emissions reporting through the Evergreen sustainable supplier assessment.

The Evergreen sustainable supplier assessment, launched in June 2023, is a tool for suppliers to engage with the NHS on their sustainability journey and understand how to align with NHS net zero ambition, including the requirements of the Net Zero Supplier Roadmap. Evergreen assessment serves as the main pathway for communications and data gathering between suppliers and NHS decision makers across NHS organisations, and will provide a mechanism for suppliers to showcase their net zero progress and wider sustainability efforts.

Low carbon models of care

Meeting net zero commitments requires carbon reductions across all patient pathways and clinical specialties. Applying a net zero clinical lens that puts clinical care delivery and patients at the centre ensures high quality care that aligns with the NHS net zero ambitions.

The NHS interacts with 1.6 million patients every day. Every one of these interactions is a point in a wider patient care pathway and journey. Each associated with a carbon footprint. From outpatient appointments and in hospital investigations and treatments, through to care at home and in the community. Each one an opportunity to transform how care pathways are designed and care delivered in ways that harness the health, environmental, social, and financial benefits that come with meeting net zero ambitions.

As every care component has an associated carbon footprint, the carbon impact of the care delivered will increase where:

a. Care needs are high and complex
b. Care is delivered inefficiently and inappropriately
c. The care delivery and treatment is resource and carbon intensive
d. The systems in which clinical care is delivered fail to embed net zero as core business as usual.

Supporting and enabling the delivery of lower carbon models of care therefore requires action to ensure that clinical care:

- Keeps people healthy, reducing care needs and the burden of disease
- Is delivered efficiently in a streamlined, co-ordinated pathway which minimises waste and duplication
- Is delivered in low carbon settings, using lower carbon treatment options where clinically appropriate
- Has environmental sustainability embedded at its core, supported through clinical leadership, systems and workforce.

Transformation towards lower carbon models of care requires a holistic approach to end-to-end care delivery, combining quality care delivery and decarbonisation.

The positive impact of driving decarbonisation actions, uniquely designed and 'owned' by healthcare professionals, clinical professional groups or clinical specialties, is evident through the successes seen in reducing the carbon footprint of [anaesthetic gases, particularly with the decommission of desflurane from January 2024,](#) and [improvements in asthma care, alongside reducing the environmental impact of metered-dose inhalers](#).

Similar successes are evident through innovative initiatives targeted to specific clinical specialty and professional groups, empowering them to act within their interest and expertise

and further influence their peers. Examples of this include the development of:

- The [Greener Allied Health Professional (AHP) hub,](#) equipping AHPs, the third largest clinical workforce, with tangible actions they can take to reduce the environmental impact of the care they deliver.
- An evidence based [Intercollegiate Green Theatre Checklist](#) which is supporting NHS surgical staff to reduce the carbon impact of surgical procedures.
- Targeted eLearning and guidance to decarbonise general practice through the Royal College of GPs, [RCGP Net Zero hub](#) and RCGP [Net Zero service](#).
- The [GreenED framework,](#) an accreditation scheme and initiative by the Royal College of Emergency Medicine (RCEM) which aims to measure and reduce the environmental impact of Emergency Departments.

Workforce and Training

There is overwhelming support for a greener NHS across the system with 9 in 10 staff supporting the NHS net zero ambitions and a growing number, 8 in 10, having taken action in their professional lives, including saving energy, recycling waste, taking greener routes to work or better prescribing such as switching to lower carbon anaesthetic gases. To build on this support, training has been developed for staff with different levels of understanding who would like to learn more, aimed at building their knowledge and skills to contribute to delivering a net zero NHS:

- The 'Building a Net Zero NHS' training module is an introductory session available freely to all NHS staff. The accessible 30-minute session has already gained significant traction, with over 50,000 launches in its first two years.
- The 'Carbon Literacy for Healthcare eLearning Pathway', is designed to develop green champions and support those who are new to net zero roles. The programme has attracted more than 500 participants since its launch in June 2023 and is a more comprehensive day's worth of e-learning and interactive workshops.
- The Sustainability Leadership for Greener Health and Care programme, which supports system leaders to develop their sustainability and leadership knowledge and skills. Launched in May 2023, the first cohorts included over 400 online participants for the 16- week course from the Leadership Academy, with a further 96 joining the more advanced 'Track 2', which included an additional three days of in-person workshops.

Medicines

Medicines account for 25% of the total NHS carbon footprint, with inhalers responsible for 3% alone. The NHS has been collaborating with key partners to support higher quality and lower carbon respiratory care, embedding clinical recommendations into practice and offering patients lower carbon inhalers where clinically appropriate. Available resources include a dedicated e-learning module on the [RCGP Net Zero Hub, webpages, leaflets and videos](#)

tailored to patients developed with Asthma + Lung UK and the Greener Practice Asthma toolkit and guide to reduce inhaler emissions.

Anaesthetic and medical gases account for 2% of the NHS overall carbon footprint. Desflurane, an anaesthetic gas used in surgery, is more than 2,500 times more potent as a greenhouse gas than carbon dioxide. In January this year, NHS England, with the support of the Royal College of Anaesthetists and the Association of Anaesthetists announced the decommissioning of desflurane by early 2024.

Nitrous oxide is responsible for the largest overall volume of emissions from anaesthetic and medical gases, accounting for at least 80% of total anaesthetic and medical gas emissions in 2019/20. Efforts to optimise the use of nitrous oxide products through leaner supply, leak audits and repairs, and improved stock management have also reduced emissions by over 45 kilotonnes of carbon equivalent compared to 2019/20.

Other action is underway to tackle the emissions associated with other medicines, including ensuring the most clinically effective and cost-effective medicines are used, working with suppliers and tackling medicines waste. The National Overprescribing Review suggests priority actions to reduce overprescribing and poly pharmacy – the sometimes unnecessary use of multiple medicines.

Competition 24: Delivering a net zero NHS for a Healthier Future

Innovation and technology are playing a significant role in supporting the NHS to achieve its net zero targets and improve patient care whilst maximising productivity and efficiency. The SBRI Healthcare programme has been supporting greener innovations through two funding competitions, launched in 2021 and 2022, and has seen a range of innovations clearly designed towards the future of environmentally friendly healthcare.

Competition 24, scoped in consultation with stakeholders working in provision of care across the spectrum, particularly focuses on a clinical engagement and pathway transformation towards lower carbon care models, as well as novel business models to enable circularity in perioperative and critical care settings.

To meet the NHS's net zero ambitions, efforts must be focused on the clinical services, pathways and areas of care delivery that contribute the most carbon either by volume or intensity. This includes complex care pathways that have known carbon intensive interventions and processes.

The competition also focuses on principles supporting a circular economy, particularly around devices and equipment used in perioperative and intensive care where single-use and linear principles are the norm, leading to significant waste and carbon emissions. The issue became highly visible at the onset of Covid-19 with the global increase in PPE and single-use devices and equipment bringing to light a real need to reduce waste. This can be achieved by shifting away from single-use approaches, whilst keeping patients safe and keeping infection control and economic viability in mind. The private and public sector need to collaborate to enable changes in business models and to capitalise on the opportunities that circular models could bring.

Challenge category 1: Clinical community engagement

Transition to lower carbon models of care is critical to achieve net zero NHS targets, through a clinical and patient-centred approach. The clinical workforce plays a key role in designing, developing and delivering care, and thus is the driving force to transform models of care that encompass low carbon, safety and efficiency towards high quality, equitable healthcare.

By engaging, equipping and developing clinicians (including clinical professionals and specialty groups), evidence-based lower carbon models of care across the healthcare sector (from community and primary care through to secondary and acute care) can be fully implemented and delivered. With over 90 clinical specialties and a multitude of professions delivering care through countless clinical care pathways and models of care, the NHS faces a real challenge in engaging and enabling this vital part of the workforce to play its role in decarbonising the NHS.

The aim of the challenge is to seek solutions and approaches that promote clinical professionals' engagement in exploring and driving lower carbon models of care within their specialty and area of expertise. The solutions should be aimed at tackling high volume, high resource, carbon intensive practices, products, and processes bespoke to the following specialties/services:

- Maternity (including maternity services) and Women's Health
- Children and Young People
- Intensive care medicine and critical care services
- Medical health professionals from generalists through to sub-specialists
- Surgical clinical communities
- Ophthalmology and Optometry community
- Clinical groups involved in core and common elements across multiple pathways such as diagnostics and investigations e.g., Pathologists and Radiologists.

Potential solutions might include innovative approaches to engaging and empowering clinical professional and specialty groups to decarbonise their area of work and transition to delivering lower carbon models of care. Examples might include:

1. Resources and mechanisms that support specific clinical professional or specialty groups to implement identified decarbonisation actions, embed and implement these into day-to-day clinical practice, and ensure they can be scaled up and embedded into business as usual.
2. Specialty or profession specific education and training materials. These should go beyond the generic introduction to the topic of environmental sustainability and health and provide specific guidance and training for a workforce group, specialty or clinical service.
3. Evidence-based best practice guidance to support low carbon care delivery.

Challenge category 2: Novel business models to enable circularity in perioperative care and critical care settings

The NHS produces a significant amount of medical waste, with approximately 133,000 tonnes of plastic disposed each year. Lower carbon alternatives are required for single-use items, disposables, or expired equipment. This is particularly the case in healthcare environments that deliver highly specialised care to patients with complex conditions, such as in the intensive care unit. Similarly, surgical steel is frequently used in surgical instruments. Manufacturing of steel is a carbon and energy intensive process. Globally, each tonne of steel

produced emits an average of 1.85 tonnes of carbon dioxide. To reduce unnecessary manufacture and disposal, there is a need for industry and healthcare providers to collaborate in order to define new business models to look at extending the lifetime of instruments as far as possible through safe reuse and reprocessing of equipment, with a minimum of safe and efficient recycling.

This priority area seeks to explore how value, or outcome-based business models for medical devices and equipment used widely in critical care and/or perioperative care, can be utilised to deliver long-term patient, cost and environmental benefits for the NHS. Strong partnerships across industry and healthcare providers, also bringing in academia would be favourable to:

1. Explore opportunities and actions to enable circular models to increase and sustain level of reuse, remanufacture and material recovery through:
    a. Developing or piloting service-style contracts, product leasing or buy-back schemes
    b. Adapting products, or design and materials, for improved reuse, reprocessing and recyclability at the end-of-life
    c. Novel approaches to repairing and remanufacturing and quality assurance of existing methods, whilst (i) exploring regulatory and safety requirements and working with the relevant bodies in development and (ii) ensuring compliance with regulatory and safety requirements.

2. Improve access to sustainable, reusable instruments and equipment used in perioperative and critical care through:
    a. Optimising the design for regulated reuse and sterilisation or ease of disinfection
    b. Improving the efficiency of, or utilisation and access to sterilisation services, including access to sterilisation and reprocessing at local level (e.g. hospital sites) to reduce transport and increase control and efficiency
    c. Optimising reverse logistics systems or material recovery schemes.

3. Minimise the amount of waste generated in perioperative and critical care settings through:
    a. Monitoring and/or reducing the need for single use clinical items and equipment
    b. Optimising pre-packaged sets to individual orders depending on the need and thus drive reduction in waste.

Challenge category 3: Net zero transformation across clinical pathways

Meeting NHS net zero commitments requires carbon reduction across all patient pathways at community, Trust, ICBs and national level. Applying a net zero clinical lens that puts clinical care delivery and patients at the centre, ensures that high quality care is delivered whilst considering the effect on the planet and aligning with net zero ambitions.

Every care component has an associated carbon footprint (from outpatient appointments, investigations, treatment, through to the equipment we use, and the associated bed days of a patient). Net zero clinical transformation offers an approach to decarbonisation that takes a holistic view of end-to-end care delivery, including a focus on preventative health and population health, improved productivity and efficiency of care delivery, as well as the use of low carbon alternatives where clinically appropriate. This approach will ensure that net zero targets are met whilst delivering high-quality, evidence-based low carbon care to all when needed. Some care and clinical pathways are known to be more carbon intensive than others, and some interventions may be associated with a higher carbon footprint. This challenge area aims to tackle known carbon intensive areas of care to identify solutions that have the potential to make significant carbon reductions on end-to-end care delivery.

Solutions to reduce carbon emissions as part of this challenge might include innovations (device, diagnostic, service change or strategy) that:

1. Support the reduction of carbon emissions associated with high volume **medical end-to-end pathways** (including prevention through to end-of-life care). These innovations could range from self-management and prevention interventions through to low carbon clinical alternative treatments, products, service models and devices in specialties such as:
    a. Diabetes
    b. Respiratory
    c. Cardiovascular
    d. Mental health

2. Support the reduction of carbon emissions associated with high volume **surgical pathways**. These could be in relation to services provided in Community Diagnostic Hubs or Elective Surgical hubs with a focus of the following specialties:
    a. Ophthalmology
    b. Trauma and Orthopaedics
    c. General Surgery
    d. Ear, Nose and Throat
    e. Urology
    f. Gynaecology

3. Enable reductions in carbon emissions for **high volume cross-cutting investigations, diagnostic tests and procedures**, such as:
    a. Radiology (CT, MRI and PET scan imaging etc.)
    b. Pathology (blood tests, histopathology, microbiology etc.)

c. Physiological measurement services
d. Diagnostic procedures (biopsies and endoscopic procedures etc.)

Useful Information for Applicants

Eligibility

The competition is open to single organisations (contracts are executed with individual legal entities) based in the UK or EU from the private, public, and third sectors, including companies (large corporates and small and medium enterprises), charities, universities and NHS providers, as long as a significant contribution towards the reduction of NHS carbon emissions through the proposed-solution is demonstrated. Organisations based outside the UK or EU with innovations in remit for this call can apply as subcontractors of a lead UK/EU based organisation or via a UK or EU subsidiary.

Collaborations are encouraged in the form of subcontracted services as appropriate.

Technologies excluded from this competition

There are a number of technologies / types of solution that are already in development, available, or will not make a significant impact on the challenges addressed in this brief. These are listed below.

Any technologies and solutions that negatively impact staff workloads and do not support the alleviation of workforce pressure or efficiency improvement, or that require high upfront capital investment by clinical services will also be excluded.

- The funding competition will not support innovations and technology tackling reduction in anaesthetic and medical gases.
- Standalone generic introductory e-learning on the topic of environmental sustainability and health.
- Approaches that do not lead to tangible and measurable actions by the clinical professional and or specialty groups.

Desirable exit points

Examples of expected exit points include:

- Demonstrated environmental impact that the proposed technology / solution or project would have on the care pathway and delivery of care it is intending to operate in.

- Quantified projected carbon savings that the proposed innovation / project can have in intended use (care pathway for example) and methodology used to estimate the carbon impact.
- A set timeline and strategy to comply with the requirements set out in the NHS Supplier Roadmap, including the development of a Carbon Reduction Plan.
- Implementation plans and model for potential NHS regional and national scale up.
- Clear identification of barriers and enablers to implementation and scaling up.
- Market validation on proposed users and strategy for commercial viability and scalability.
- Engagement with relevant partners and key stakeholders (including PPIE) to achieve a sustainable spread of the proposed innovation.
- Health inequalities impact assessment.

Key information to include

Applicants are expected to respond to the specific challenge, providing details as to how their innovations meet the brief and support all NHS net zero ambitions. Consideration of the following topics is expected as part of the proposal:

Supply chain

- Consideration should be given to the upstream and downstream implications of carbon emissions management activities.
- An outline of your approach to developing a carbon reduction plan in line with the NHS Supplier Roadmap. Products sourced and manufactured in the UK are particularly encouraged.

Carbon reduction

- A detailed methodology and/or framework to outline qualitative and quantitative approaches to assess any reduction in carbon emissions resulting from the innovation.
- An environmental qualitative assessment of the proposed innovation from the 'extraction and upstream production' stage to 'end-of-life' stages.
- Identification of carbon hotspots and key opportunities for carbon emission reductions associated with the innovation and the implementation of the innovation in the NHS. A clear assessment of areas of dependency or areas requiring greater transparency would be beneficial.
- Evidence of where benefits of the innovation may impact the potential carbon footprint elsewhere.

NB: The impact of reducing carbon emissions in one part of the system should be carefully considered so that it does not increase emissions and resource requirements in other parts of the system.

Digital innovations

Applicants are expected to clearly articulate a digital innovation's design towards low carbon models and climate change resilience in healthcare settings and health and social care use. Digital innovations should demonstrate:

- How you have considered and minimised the carbon emissions associated with running the digital technology, including cloud server / provider chosen.
- How you have included risk factors and challenges associated with climate change / climate events (for example heatwaves, floods, and other climate events) for safe and efficient running of the digital innovation.

We will be requiring all digital products and innovations to use a standardised net-carbon impact assessment process and climate risk tool to ensure a consistent process is used to assess and compare extra carbon costs and reductions created by the innovation.

If any information related to current net-carbon impact and quantification is available, sight of the methodology or tool used to assess the impact and carbon emissions is required. However, a standardised methodology will be applied to funded digital innovations.

Additional considerations

The programme supports innovations that plan to meet relevant regulatory standards and generate a strong evidence base. For this reason, innovators are encouraged to make sure that they are aware of the specific compliance requirements for their innovation (e.g. CE marking, UKCA, relevant ISO certifications, etc.). For any digital intervention, the NICE Digital Health Technology Framework should be consulted and your application should evidence your plan to meet the appropriate evidence guidelines. This comprises both clinical effectiveness and economic evaluation with a particular focus on patient outcomes and use within the NHS. Evidence that the Digital Technology Assessment Criteria (DTAC) has been considered should be demonstrated in your proposal. Those submitting applications are also asked to consider:

- How will the proposed solution impact the care system and how will the system need to be changed (including people, processes and culture) in order to deliver system-wide benefits?
- How will you ensure that the innovation will be acceptable to patients (and their families and wider support network) and to health and social care workers? How could these groups be involved in the design of a solution and its development?
- How will you ensure that the innovation is affordable to the NHS and wider systems such as Integrated Care Systems (ICSs) both immediately and throughout the life of the product? What evidence, both of health economics and delivery of true impact will the NHS and wider system require before the technology can be adopted?

- How will you ensure that the innovation enhances equity of access (e.g. takes account of underserved ethnic or economic groups) and increases engagement with vulnerable groups?
- All proposed technologies should take into consideration appropriate integration with electronic patient records (EPR). In addition, accessibility of digital solutions can be a barrier to certain populations such as deprived and vulnerable women or women living in remote or rural areas. Therefore innovations should adapt and respond to accessibility barriers in order to provide equity of care to all women and their families.

SBRI Healthcare Programme

A new national SBRI Healthcare competition is being launched by the Accelerated Access Collaborative (AAC) in partnership with the Greener NHS Team (GNHS) and the Academic Health Science Networks (AHSNs) to identify innovative new products and services that accelerate the development of greener innovations towards a more sustainable healthcare system. The projects will be selected primarily on their potential value to the health service and social care system and on the improved outcomes delivered for those who receive care.

The contracts awarded will be for a maximum of 12 months and between £50,000 and £100,000 (NET cost, excluding VAT) per project.

Developments will be 100% funded and suppliers for each project will be selected by an open competition process and retain the intellectual property rights (IPR) generated from the project, with certain rights of use retained by the NHS.

SBRI Healthcare application process

This competition is part of the Small Business Research Initiative (SBRI) programme which aims to bring novel solutions to Government departments by engaging with innovative companies that would not be reached in other ways:

- It enables Government departments and public sector agencies to procure new technologies faster and with managed risk
- It provides vital funding for a critical stage of technology development through demonstration and trial – especially for early-stage companies.

The competition represents an opportunity for organisations to engage a public sector customer pre-procurement.

The application process is managed on behalf of NHS England by LGC Group. All applications should be made using the application portal which can be accessed through the Research

Management System. Applicants are invited to consult the Invitation to Tender (ITT) and the Guidance for Applicants on the SBRI Healthcare website to help prepare your proposal.

A briefing event for businesses interested in finding out more about these competitions will be held on 22 September 2023, 14:00 – 16:00 BST. Additional webinar events will be organised to respond to potential applicants' questions. Please check the SBRI Healthcare website for confirmation of dates, information on how to register, and details of the challenges that will be presented.

Key dates

Competition launch	31 October 2023
Deadline for applications	22 November 2023 (13:00 BST)
Assessment	December 2023-January 2024
Projects start	February 2024

More information

For more information on this competition, visit: https://sbrihealthcare.co.uk/

For any enquiries email: sbri@LGCGroup.com

For more information about the SBRI programme, visit:

https://www.gov.uk/government/collections/sbri-the-small-business-research-initiative