

Professor Jason Leitch
National Clinical Director
NHS Scotland



**Healthier
Scotland**
Scottish
Government





Source: Rab Lawrence, flickr



Source: Iain Cameron



Source: Joe Glennie

Healthcare as % of carbon footprint

World 4.4%



UK 5.4%



The image shows two Scottish Saltire flags (white saltire on a blue field) flying against a bright blue sky with scattered white clouds. The flags are positioned diagonally, with one in the foreground and another slightly behind it. The text "In Scotland..." is overlaid in the center in a white, bold, sans-serif font.

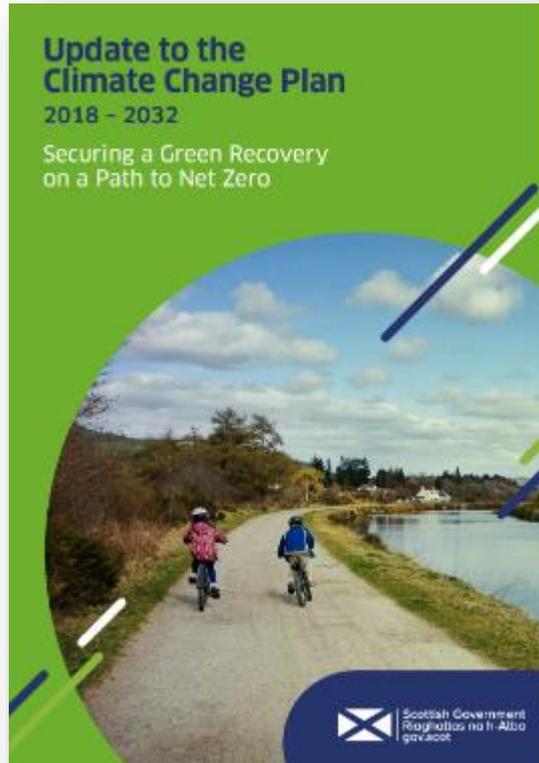
In Scotland...

“This will require unprecedented change in how we work.”

Humza Yousaf
Scotland’s First Minister
and former Cab Sec Health and Social Care



Scotland's national climate plan

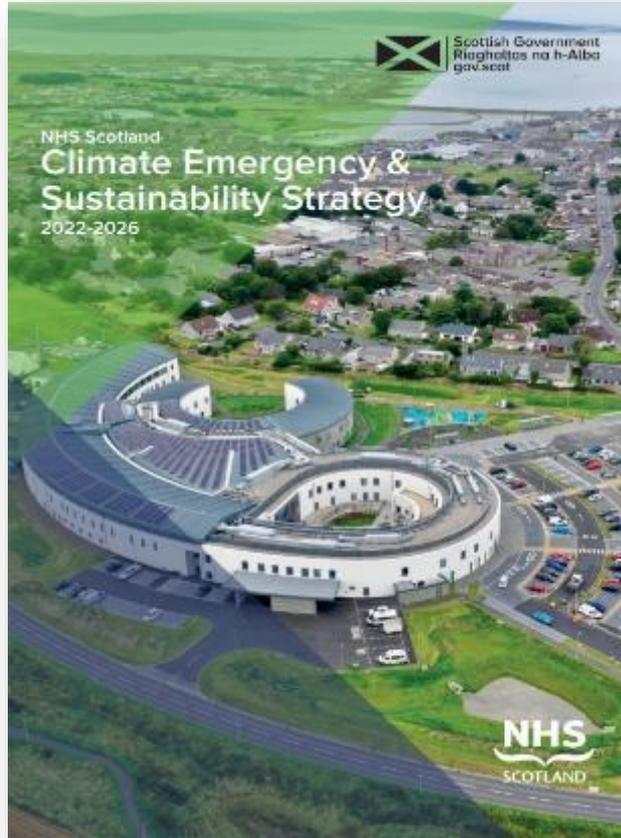


Scan to access

2045

Scotland's net zero target date

NHS Scotland's Climate Plan



Scan to access

Core themes

**NHS Scotland Sustainability Action Programme
(Responding to the Climate Emergency)**

Sustainable Care

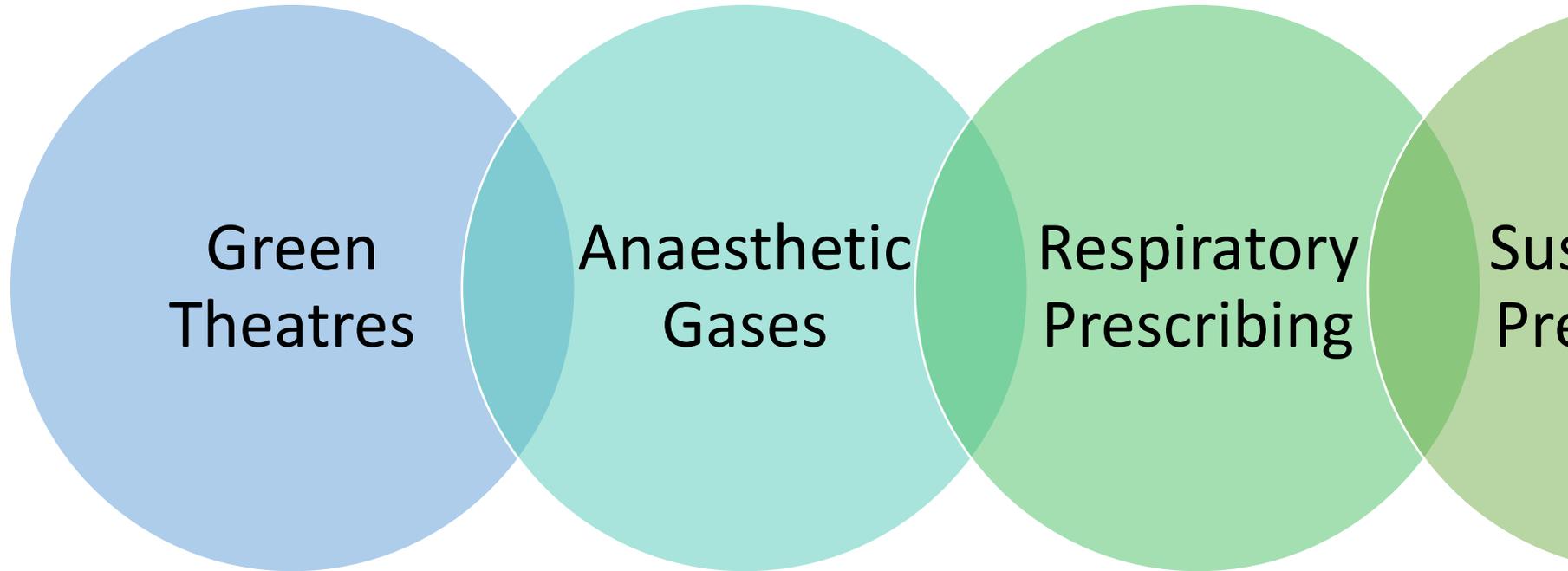
Capital & Assets

Greenspace,
Biodiversity &
Green Health

Procurement,
Waste & Circular
Economy

Transport &
Travel

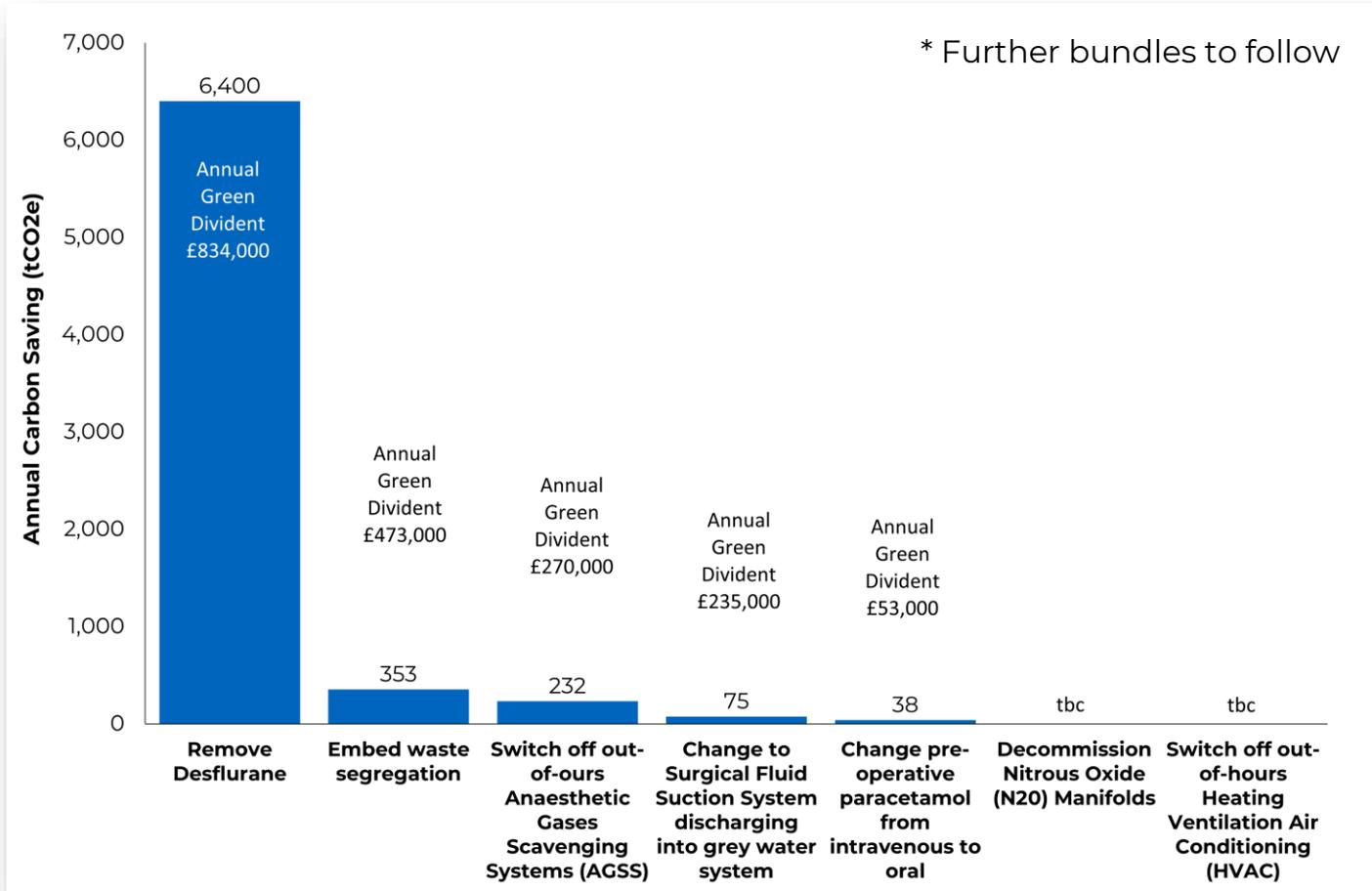
Sustainable Care



Green Theatres



NHS Scotland: Green Theatre Project - Bundle A*



Anaesthetic gases



Health

Scotland first to ban environmentally harmful anaesthetic

© 5 March 2023



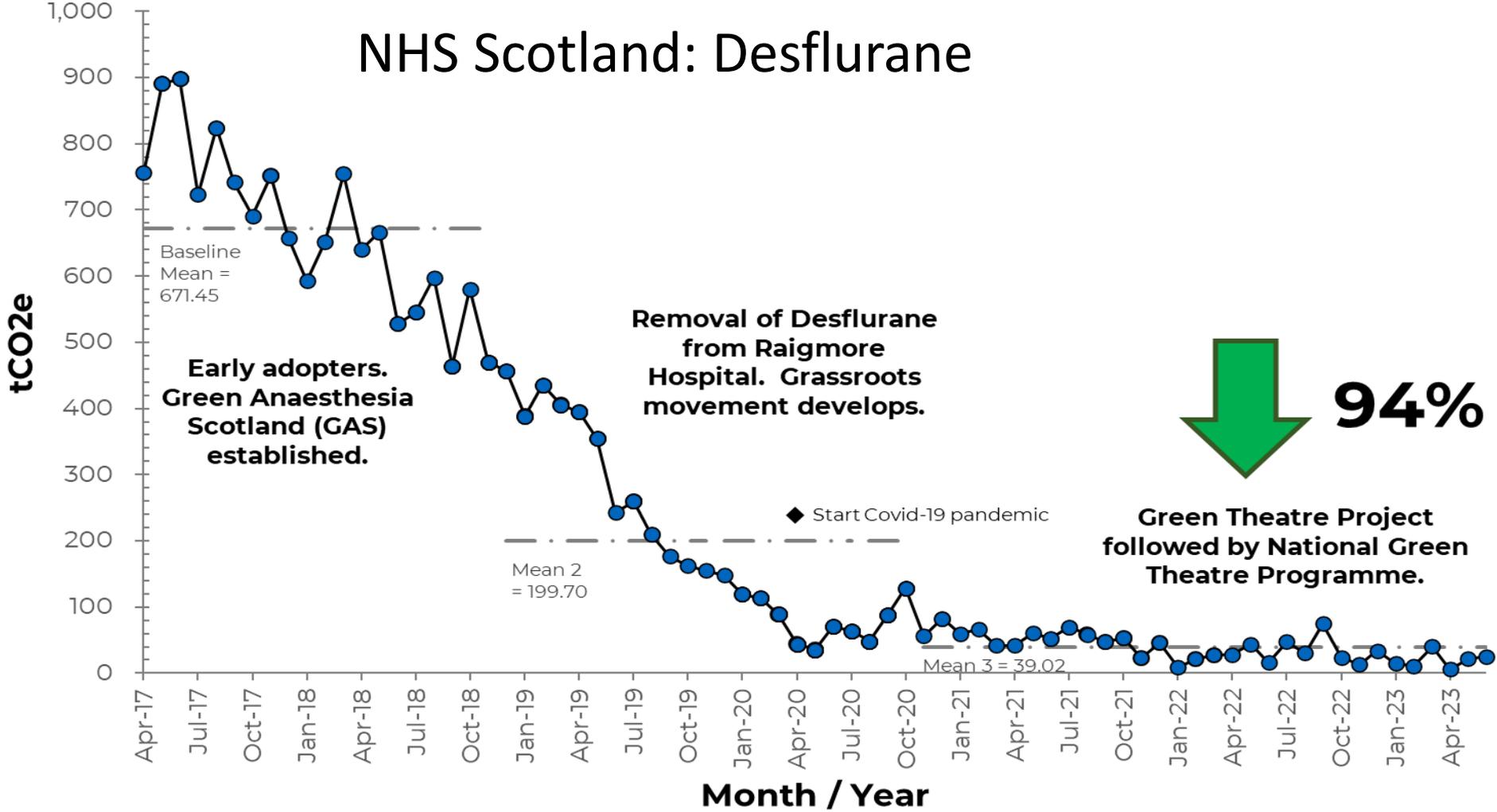
Climate



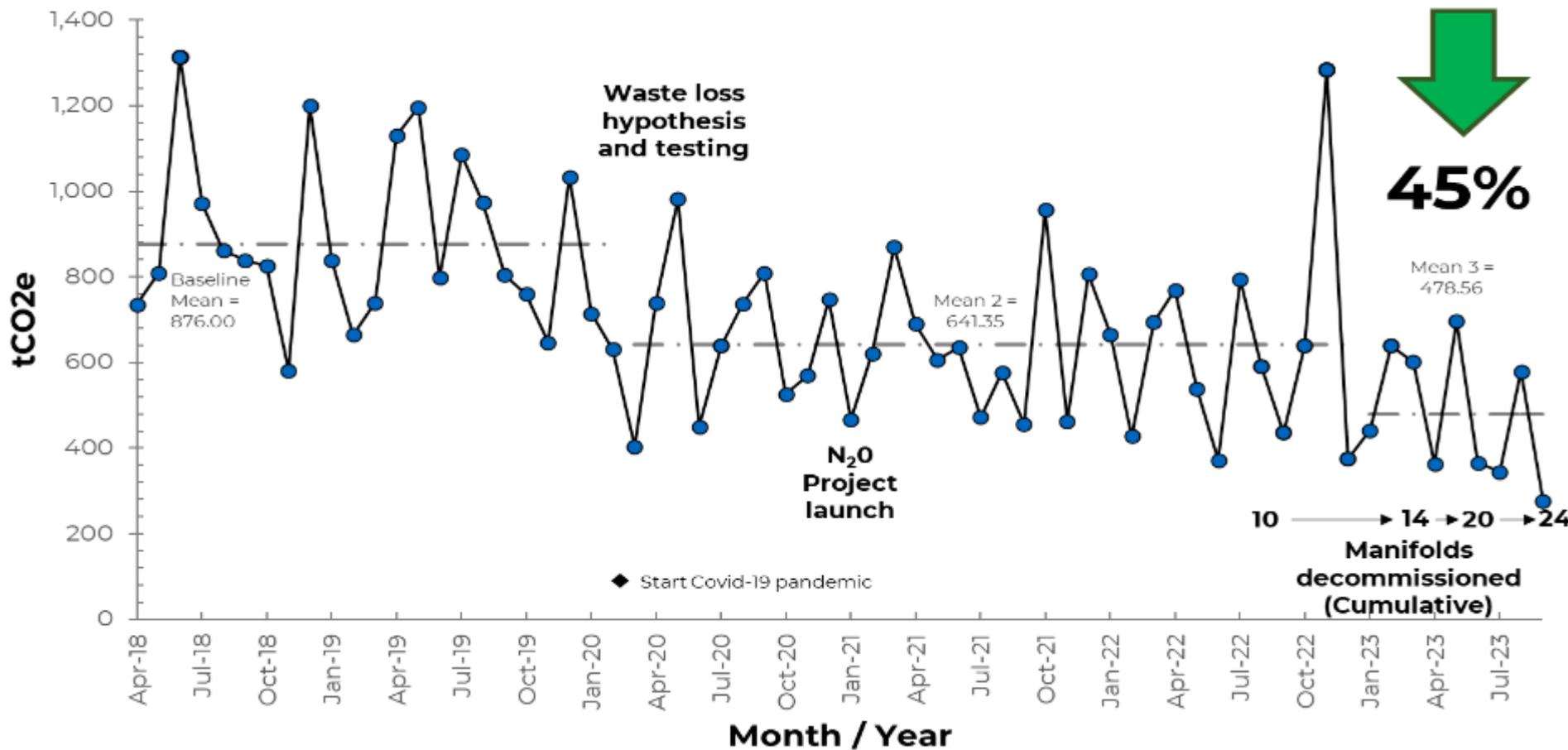
GETTY IMAGES

By Smitha Mundasad

NHS Scotland: Desflurane



NHS Scotland: N2O



Respiratory Prescribing



Sustainable Prescribing





Healthcare
Improvement
Scotland

SIGN

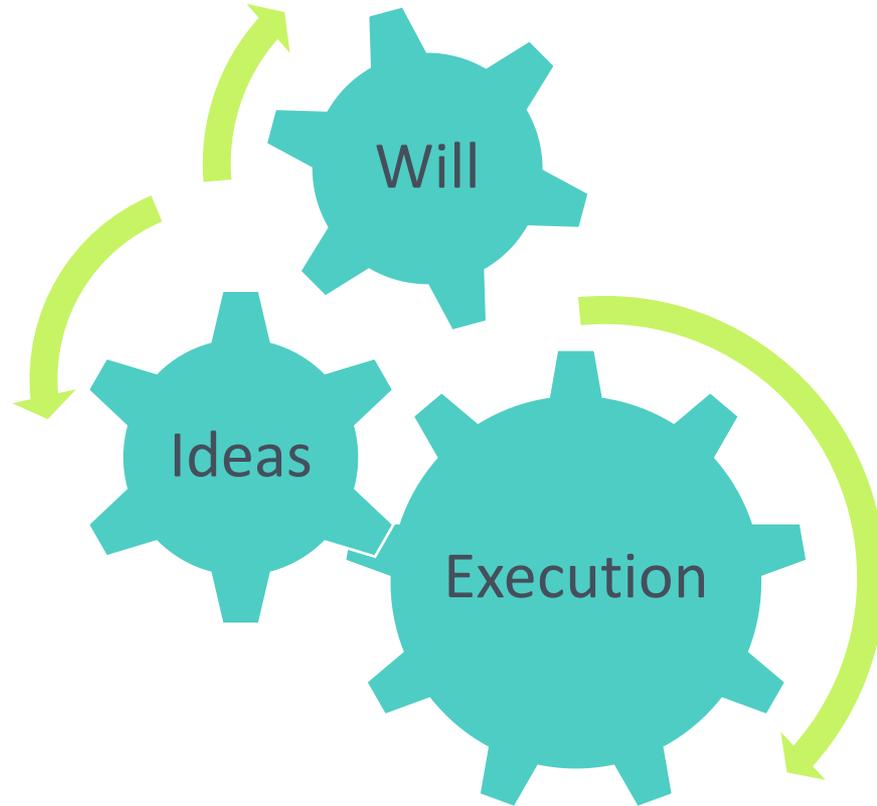
Evidence-based
clinical guidelines

Sustainability into guidelines

A blue and white flag, possibly a national flag, is shown flying against a bright blue sky with scattered white clouds. The flag is the central focus of the image, with its white cross-like shape clearly visible against the blue background. The text "Can it be done?" is overlaid in white on the flag.

Can it be done?

Implementing all this at scale...



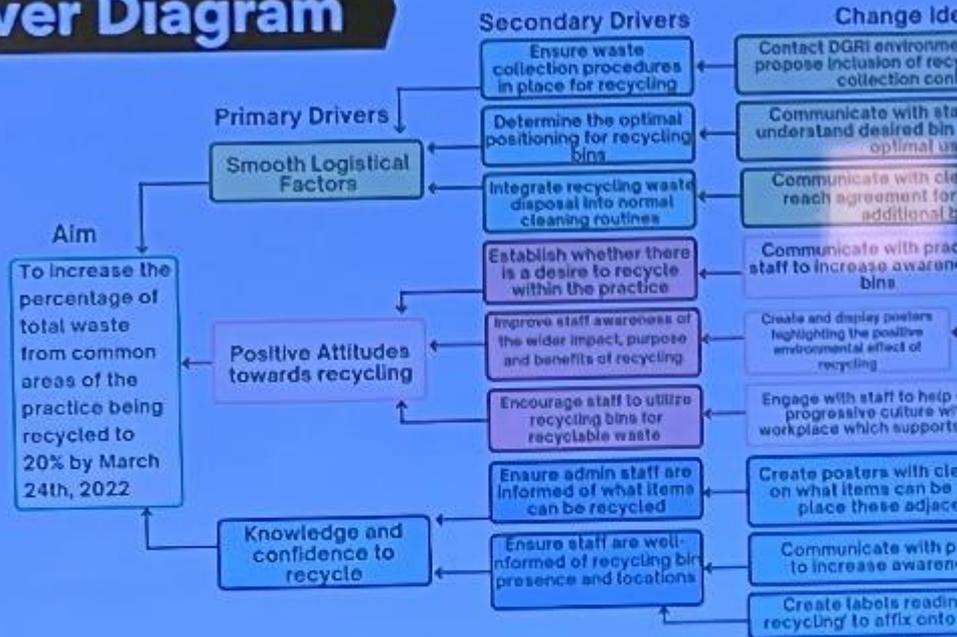


**Greener
Practice**

**Shetland
Islands**



Driver Diagram



**“It is not necessary to
change.**

Survival is not mandatory.”

WE Deming



No Planet B

Dr Dominique Allwood

Chief Medical Officer, UCLPartners

Director of Population Health, Imperial College Healthcare NHS Trust

What NHS staff and the public say.....



How important is it for health and care systems to work in a way that supports the environment?

98%

**Important or
Very
Important**



Do you agree the org you work for actively supports the environment e.g. reducing emissions, waste?

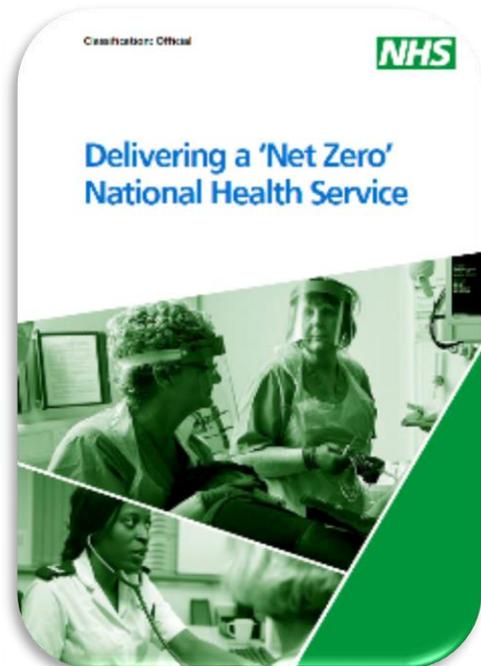
67%

**Agree or
Strongly agree**



NHS England and NHS Improvement  @NHSEngland · Oct 1

The NHS has today adopted a multiyear plan to become the world's first carbon net zero national health system. Read the Net Zero report to find out more. [#GreenerNHS england.nhs.uk/2020/10/nhs-be...](https://www.england.nhs.uk/2020/10/nhs-be...)



 394

 405

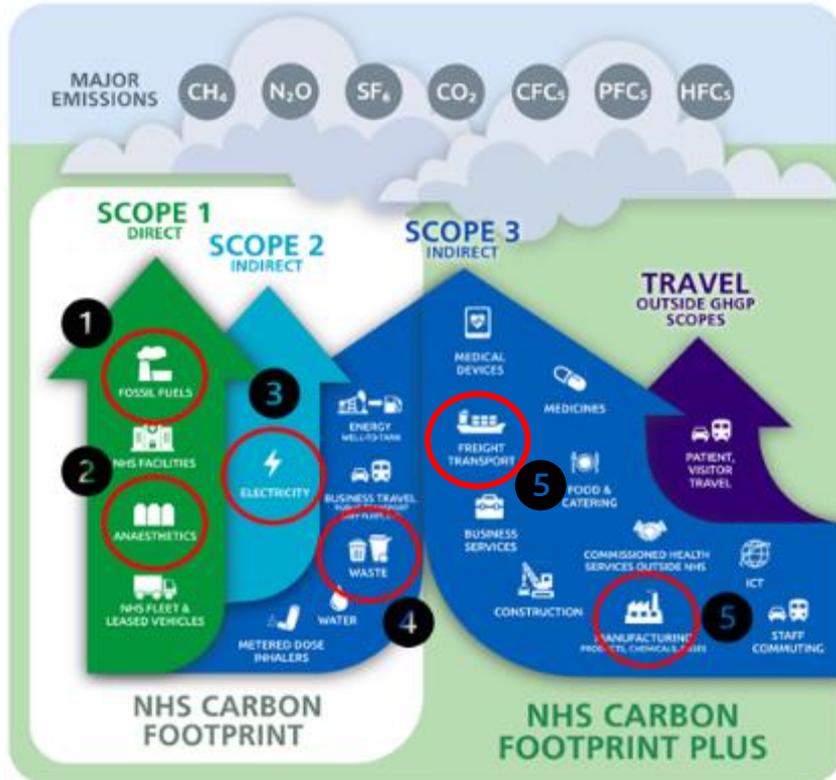
 336



Our 12 green plan goals



Rapid and wide-ranging action



- 1 **Decarbonising our estate:** air source heat pumps that are reducing our dependency on fossil fuels
- 2 **Greening clinical pathways:** decommission an entire hospital nitrous oxide manifold system that is reducing anaesthetic gas waste
- 3 **Reducing electricity consumption:** automatically turning off idle computers
- 4 **Reducing clinical waste disposal emissions:** changing waste segregation behaviours
- 5 **Reducing single use plastics:** adoption of reusable textiles e.g. gowns in theatres

Engaging Colleagues

“

Sustainability is not one person's job, it has to be everyone's job.....we need approaches to making sustainability more sustainable

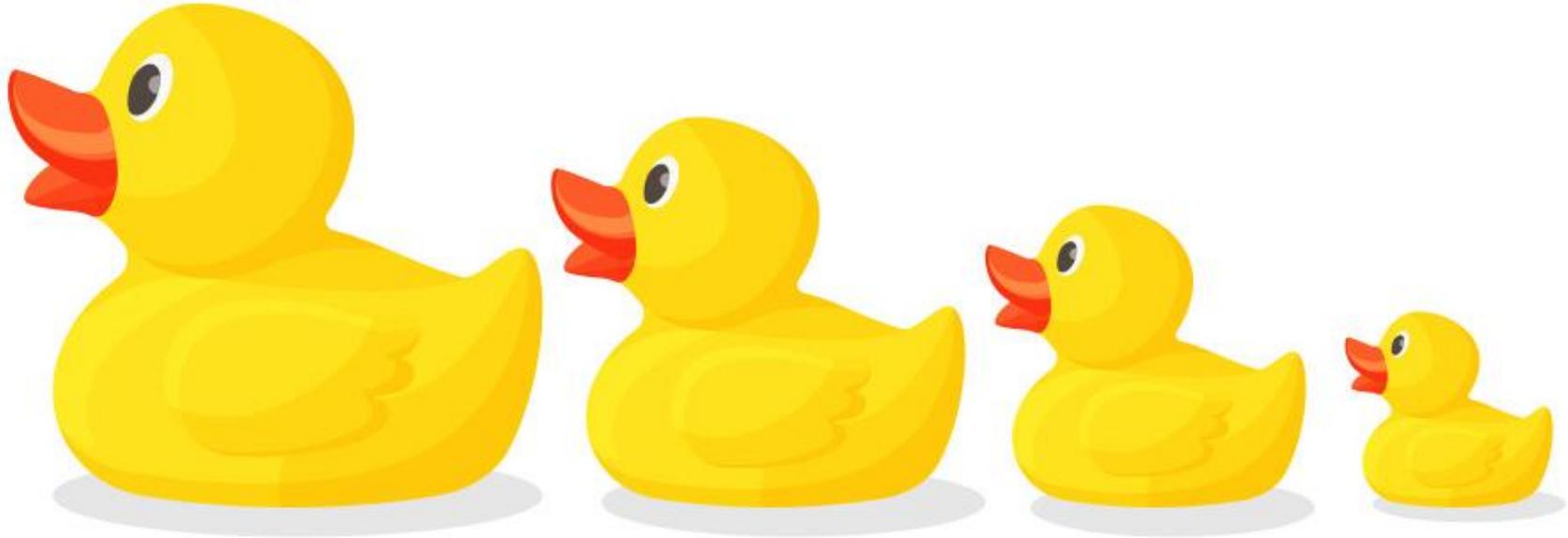
”

Think big, start small.....

World peace

Net Zero in Healthcare

Cannula QI project



75% of ED patients were cannulated
37% had a cannula
68% had a negative



Save a
cannula...



...to save
the planet

a **66g** cannula causes
over **1kg** of **CO₂**
emissions in its
manufacture & disposal



Rizan et al, The carbon footprint of waste streams in a UK hospital, Journal of Cleaner Production, Volume 286, 2021, 125446,
<https://doi.org/10.1016/j.jclepro>

CXH ED CANNULATION GUIDELINES

These guidelines were agreed by the ED Consultants to minimise the number of inappropriate cannulas which are never used

STOP

These patients almost NEVER require a cannula

Mild bleeding
Chest pain
Palpitations (NEWS 0)
Resolved TIA
Minor injury
Back pain
Mental illness
Overdose (NEWS 0)
Headache
Viral illness
SOB/Cough (NEWS 0)

MAYBE

TLOC
Dizziness + Vertigo
First fit/seizure
Sore throat
Renal colic (if active vomiting)
D&V (if active vomiting)
Sickle cell Crisis

GO

RESUS patient/ risk of deterioration
Signs of Sepsis
High risk Cardiac patients
Suspected febrile neutropenia
Severe pain
Significant bleeding
↓ Consciousness
Major Trauma
Requiring CT with contrast

"Just in case"
is a
MYTH!
40% of cannulas
inserted were
never used*



* Initial measurement
in 2001



NB: Ignore RED indications if patient fulfils ANY GREEN indication e.g. Overdose with ↓consciousness

@Imperial_EM

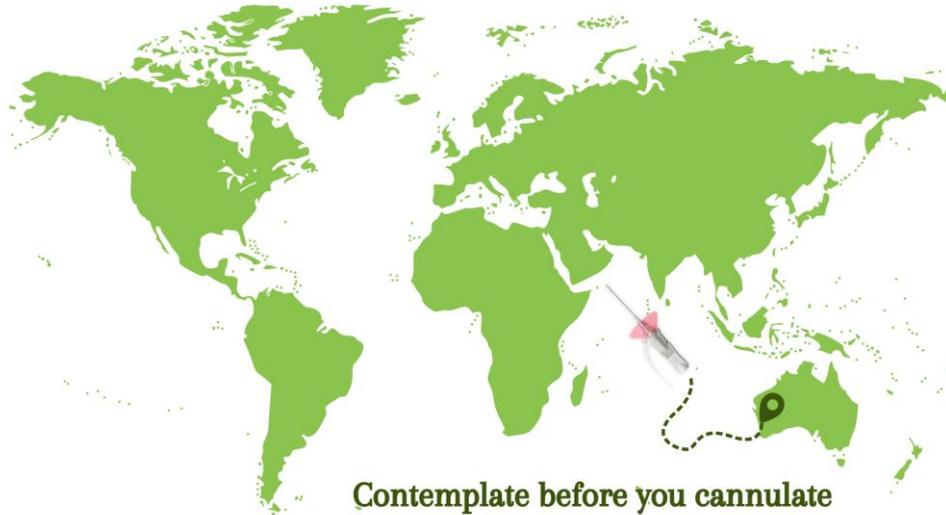
Imperial College Healthcare 

Did you know...?

The **carbon emissions** from our unused
cannulas each year equals

21

flights to **Australia**.



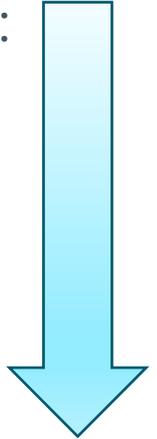
Contemplate before you cannulate

In one ED in one year:

15,000 cannulas

19,000 kgCO₂e

£95,000 savings



Greener NHS

System progress

Drone deliveries of vital chemotherapy to the Isle of Wight

University Hospitals Birmingham: A world first in carbon net zero surgery

Improving health outcomes for respiratory patients while

[Home](#) > [Greener NHS](#) > [System progress](#) > Reducing unnecessary cannulation at Charing Cross Hospital

Reducing unnecessary cannulation at Charing Cross Hospital



Courageous leadership

“ People seek healthcare to make them better. On the one hand provide clinical care, but on the other hand we are responsible for making people sick through our environmental impact.....we need to fundamentally change how we act as leaders and operate our organisations and health systems ”

What makes health care organisations anchor institutions?

Health care organisations are rooted in their communities. Through their size and scale, they can positively contribute to local areas in many ways beyond providing health care. Health care organisations can make a difference to local people by:

Purchasing more locally and for social benefit



Using buildings and spaces to support communities



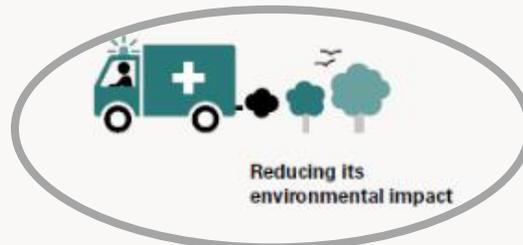
Working more closely with local partners



Widening access to quality work



Reducing its environmental impact





NHS

**Great Ormond Street
Hospital for Children**
NHS Foundation Trust

Our doctors and nurses treat children with a range of severe respiratory conditions, but on their way into the hospital that is supposed to make them better, patients are exposed to filthy air which is exacerbating their illnesses.



NHS
Great Ormond Street
Hospital for Children
NHS Foundation Trust

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Home > News > GOSH becomes first London hospital to declare a climate and health emergency

GOSH becomes first London hospital to declare a Climate and Health Emergency

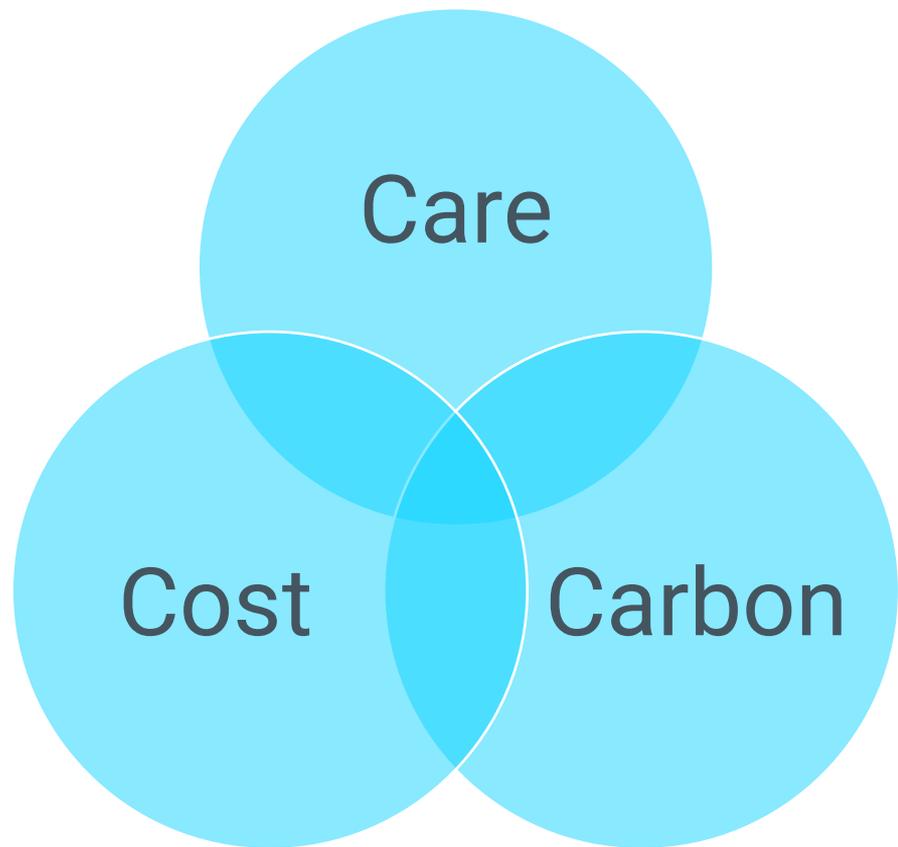
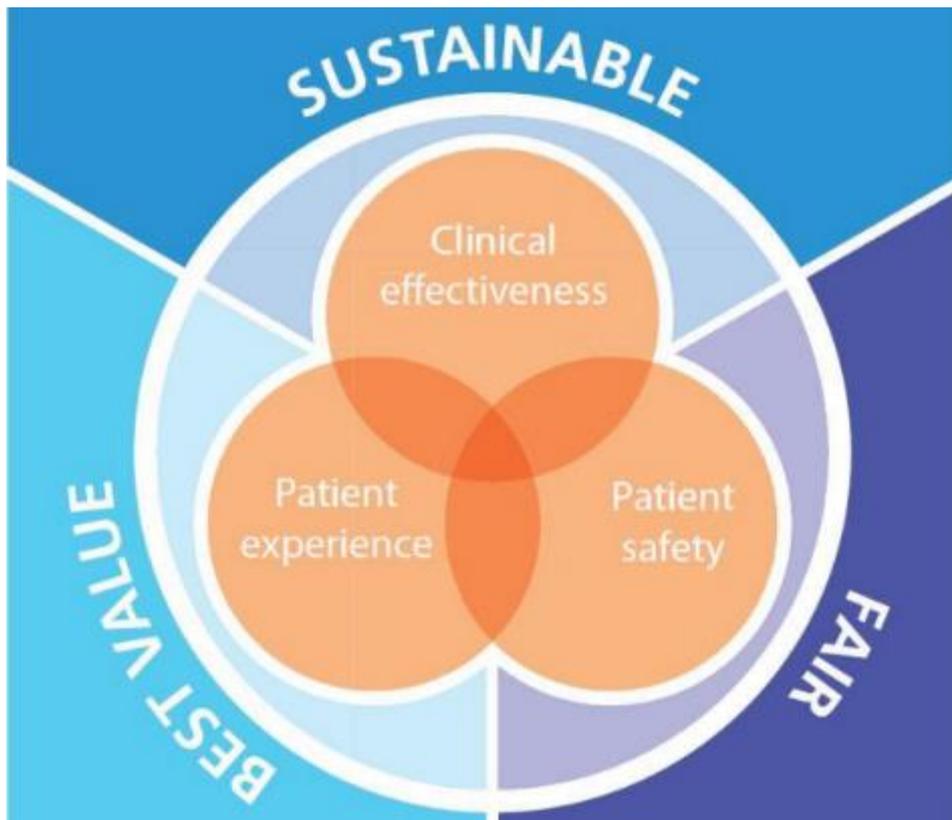
Clean Air Hospital Framework

Co-designed by Great Ormond Street Hospital and Global Action Plan



Great Ormond Street
Hospital for Children
NHS Foundation Trust

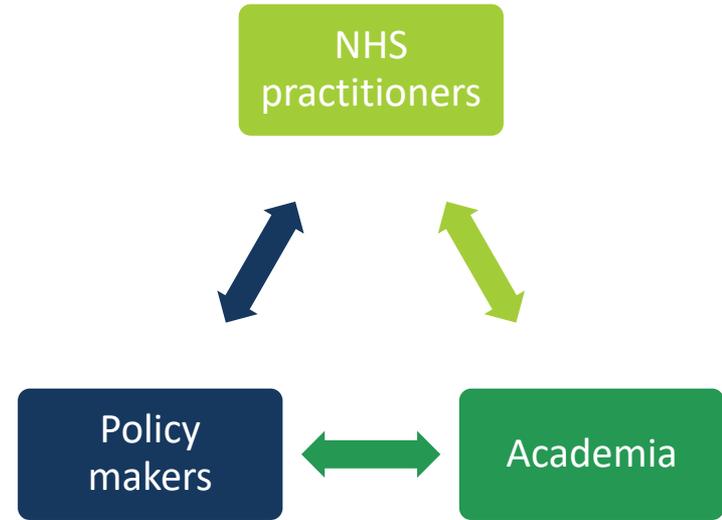




Fostering collaboration

“ Our issues are so big we can't buy our way out of them.....we need to collaborate to identify and adopt solutions at scale to help solve our challenges together ”

Connecting for Change



NHS could save around **36 tonnes** of CO2 -
£30,000 per year per OR.

Across the NHS that could save up to **108,000**
tonnes of CO2 and **£90m** per year.

That's the equivalent of taking 76,000 cars off UK
roads



<https://uclpartners.com/project/uclpartners-climate-collaborative-connecting-for-change-to-help-achieve-nhs-net-zero/>

Empowering everyone to make change



Courageous leadership at whatever level of the system



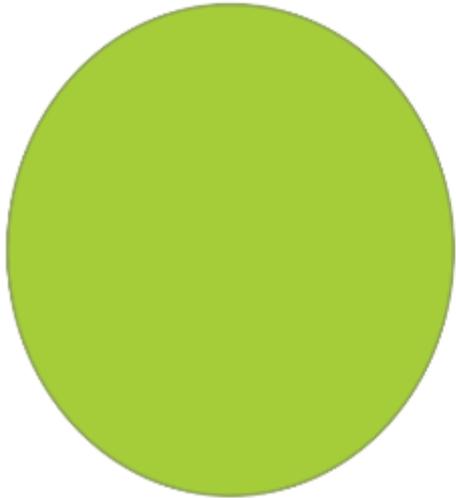
Collaborative working to tackle complex challenges



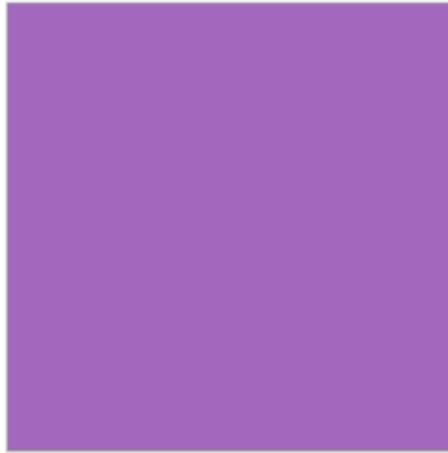


Don Berwick

To leave you with...



What's still
circling around in
your head?



What's squared
away for you?



What 3 actions will
you begin?

Thankyou

