



Welcome to The NHS Estates & Facilities Conference 2023

The NHS **2023**
Estates &
Facilities
Conference



6th July 2023
08:00am – 16:00pm
15 Hatfields, London



Slido

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The NHS
Estates &
Facilities
Conference

2023



Current Trees Planted to date: **10,444**

A top-down photograph showing several hands of different skin tones cupping dark soil and small green seedlings, symbolizing environmental care and growth.

Our Commitment to the Planet

For Each Delegate Attending Our In-Person Event Today, we will be planting 1 tree with our Key Sustainability Partner



PLAY IT GREEN



Chair Opening Address

The NHS
Estates &
Facilities
Conference

2023



Andrew Gate

Regional Delivery Director: North
East & Yorkshire Region - **NHS**
England Estates and Facilities Team



Speaking Now...

The NHS **2023**
Estates &
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Kit Connick

Chief Officer Strategy &
Partnerships - **Cambridgeshire
& Peterborough ICB**

Estates as an enabler of integrated care

Kit Connick, Chief Officer Strategy & Partnerships



Starting with our mission as our foundation



Improve cancer performance	Implement our cardiovascular disease strategy	Children and young peoples mental health	Make best use of all public estate and capital	Make the best use of all resources
Reduce the time people wait for elective care	Identify and better support people with high and complex needs	In community care (incl. Primary care)	Delegate deliver to our business units (incl. place)	Live our leadership compact
Increase on the day urgent care performance	Stabilise and increase our workforce	Ensure service are as productive as they can be	Focus on prevention	Use our single quality improvement framework
Focus on the basics	Always think ahead	Reform services	Make big moves	Lead well
Ensure our children are ready to enter education and exit prepared for the next phase of their lives	Create an environment to give people the opportunity to be as healthy as they can.	Promote early intervention and prevention measures to improve mental health and wellbeing.	Reduce poverty through better employment and housing.	
Getting better outcomes for children.	Reducing inequalities deaths in the under 75's.	Increase the number of years people live in good health.		
ALL TOGETHER FOR HEALTHIER FUTURES				

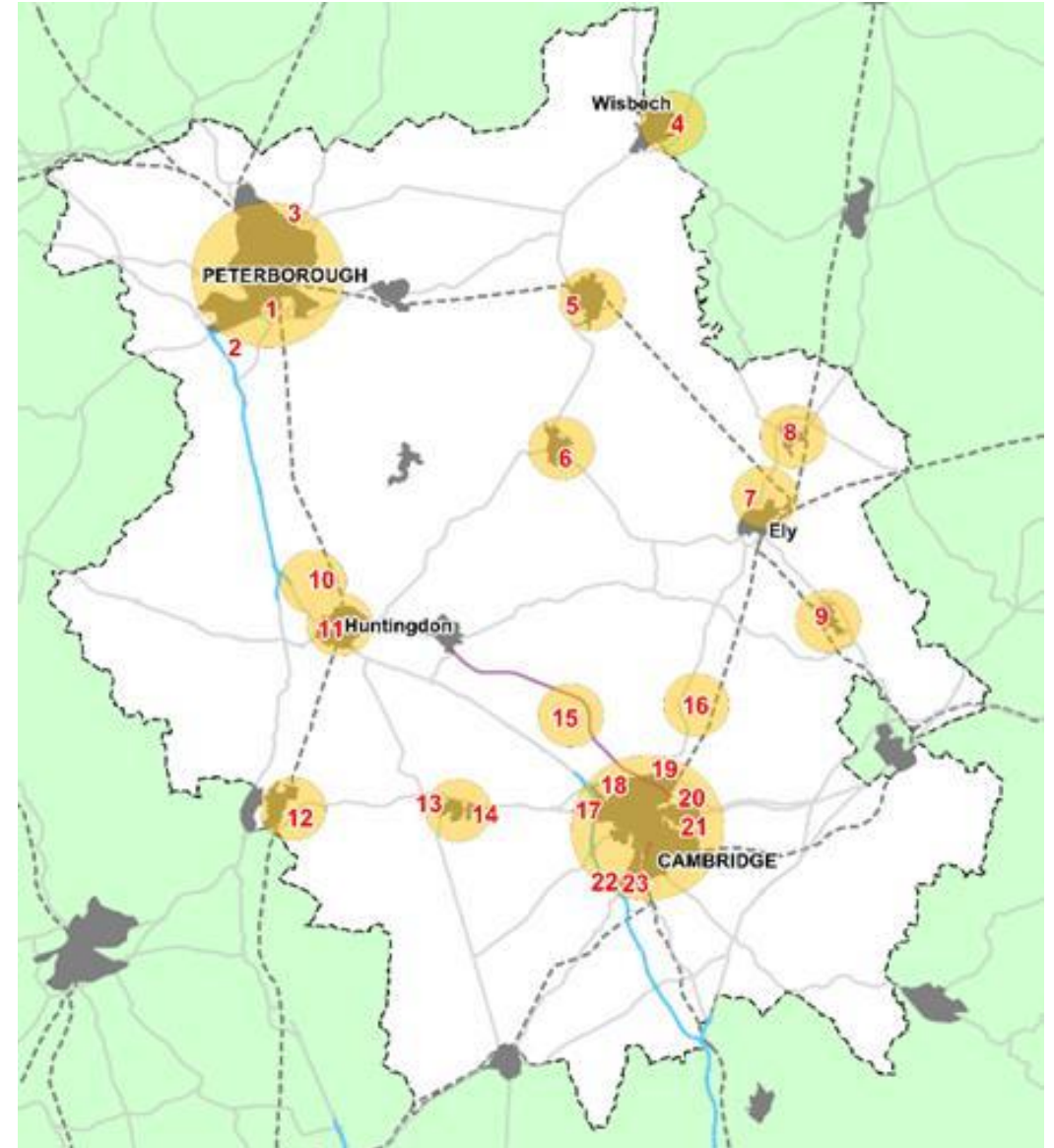


Future housing developments - overview

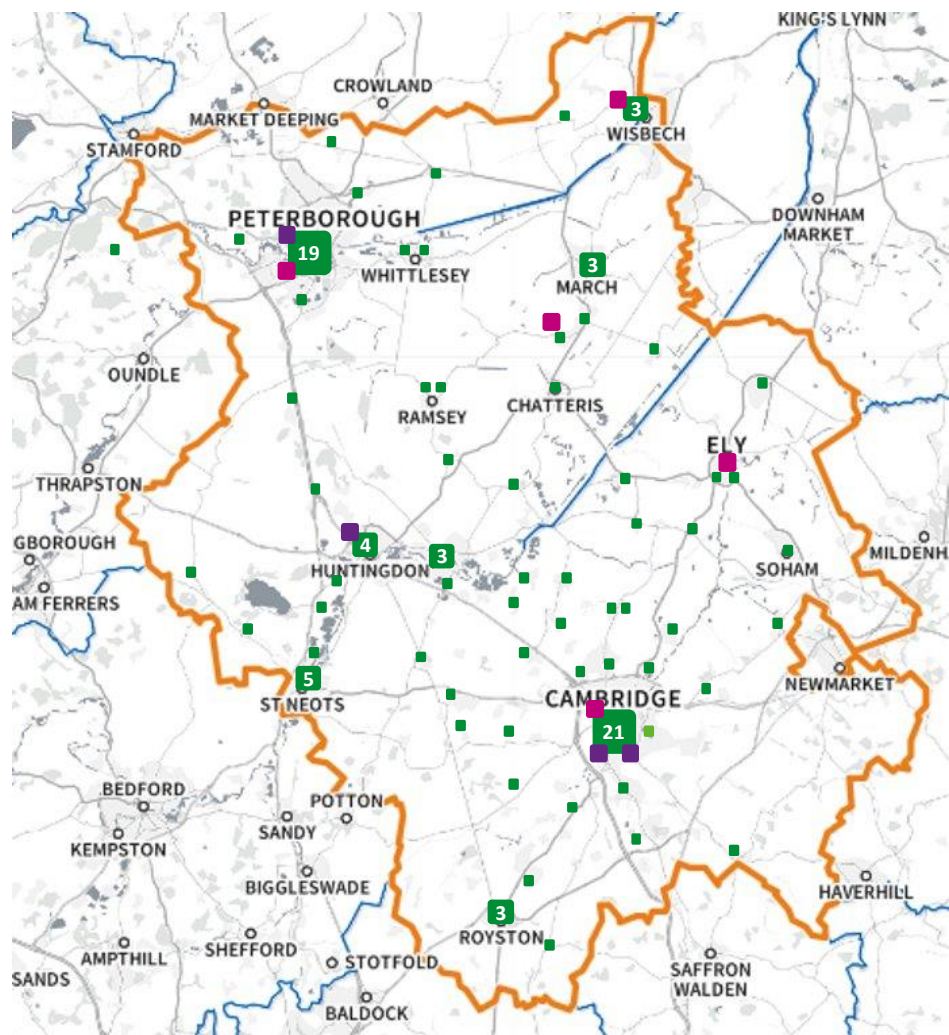


The 2020 Joint Strategic Needs Assessment (JSNA) identified future developments across Cambridgeshire and Peterborough.

- In total there were **77,860** new homes planned. The largest groupings of these were Waterbeach New Town and Northstowe.
- When the JSNA was published, **8,112** had already been constructed.



The current estate: our clinical estate mapped



Key ■ Acute ■ Community Hospital ■ GP Surgery

Fixed points

- Acute hospital sites
- Public finance initiatives (PFIs) – We have fixed PFI contracts at Addenbrooke's, Hinchingsbrooke, Peterborough City Hospital, Royal Papworth and Peterborough City Care Centre
- Lease - Oak Tree Centre, Huntingdon - new 15-year lease to be signed
- Leases – Longer term commitments at Unix House CCS and Town Hall CPFT
- GP ownership – around 47.5 % of our primary care premises are held freehold by GPs or on leases from 3PDs
- Only 9% of properties can be defined as modern, whereas 45% of the estate we have an age for are built pre-2004. Furthermore, the condition of our estate varies across the piece.

Other estate

- Royston Hospital – On our geographic border, with the vast majority of space underutilised for delivery of patient facing services.
- Peterborough City Care Centre – Perceived as high-cost occupation
- All our 4 PFI sites in Peterborough sit in the top ten of the highest costs estate per sqm
- Office accommodation with smarter working is underutilised
- Doddington Hospital – restricted accessibility as a rural location for provision of community services

Our estate strategy on a page



Our system strategy

Our mission statement:
All together for healthier futures
Overarching health and wellbeing ambitions

- Have better outcomes for our children
- Reduce inequalities in deaths under 75 years
- Increase the number of years that people live in good health

System objectives

- Equity
- Opportunity
- People
- Quality
- Sustainable

Our estate strategy aims

Accessible: Improve patient access to a wider range of services through increased integration and consolidation/co-location

Efficient: Work towards an environmentally net zero carbon and financially sustainable estate

Effective: An estate that is well maintained and flexible to change

Future proofed: Optimise capital funding from developer contributors, disposal investment, and optimise the opportunity of new investment to make demonstrable impact

Our estate objectives

Transform places and spaces

- Development of integrated hubs
- Integrated solutions for areas of highest population growth
- Increased access to community diagnostics
- Utilise wider public sector

State smarter and greener NHS

- Improve estate flexibility and utilisation
- Rationalise back office estate
- Optimise assets and remove unwarranted variation

Excellence in delivery and insights

- Improve estate data and insights
- Develop a holistic ICS capital plan

Our outcomes to support Fuller Stocktake/LTP

- Enable all PCNs to evolve into integrated neighbourhood teams
- Support primary care where it wants to work with other providers at scale; tackling gaps in provision particularly for the least well-served communities
- Teams collocated within neighbourhoods, to extend models of personalised care, including the voluntary sector and social prescribing

- Taking a 'one public estate' approach and maximising the use of community assets and spaces
- A well utilised estate, underpinned by space shared across organisations
- Developing a roadmap towards net zero carbon

- Ensure capital is invested to give the optimum return on capital areas through measurement of health outcomes
- The necessary capacity and capability to drive change and to offer solutions to the most intractable estates issues

Primary Care: emerging themes and headlines



A significant amount of detailed feedback has been received from primary care colleagues, which we will seek to address through detailed action plans. This feedback has been collated and condensed into high level priority areas under three overarching categories, which we will seek to prioritise and systematically address with primary care colleagues.



Capital and revenue

- Capital plan
- Revenue funding
- S106 and CIL
- Property ownership
- Facilitate multi-occupancy of shared space via innovative approaches, with shared risk models
- Individual practice needs considered alongside PCN/IN needs
- Reduce bureaucracy and time in maximising estate opportunities (CDEL, GAF, PCD).



Alignment to system strategies

- The estate strategy needs to be connected to other system strategies and operational plans (clinical, workforce, digital etc)
- Further linkages needed to VTS, OPE, NHS Trust and LA data
- Further work to be undertaken on data validation and existing filling data gaps
- Ensuring buy in from all system stakeholders
- Create conditions to respond quickly to meet General Practice estate needs

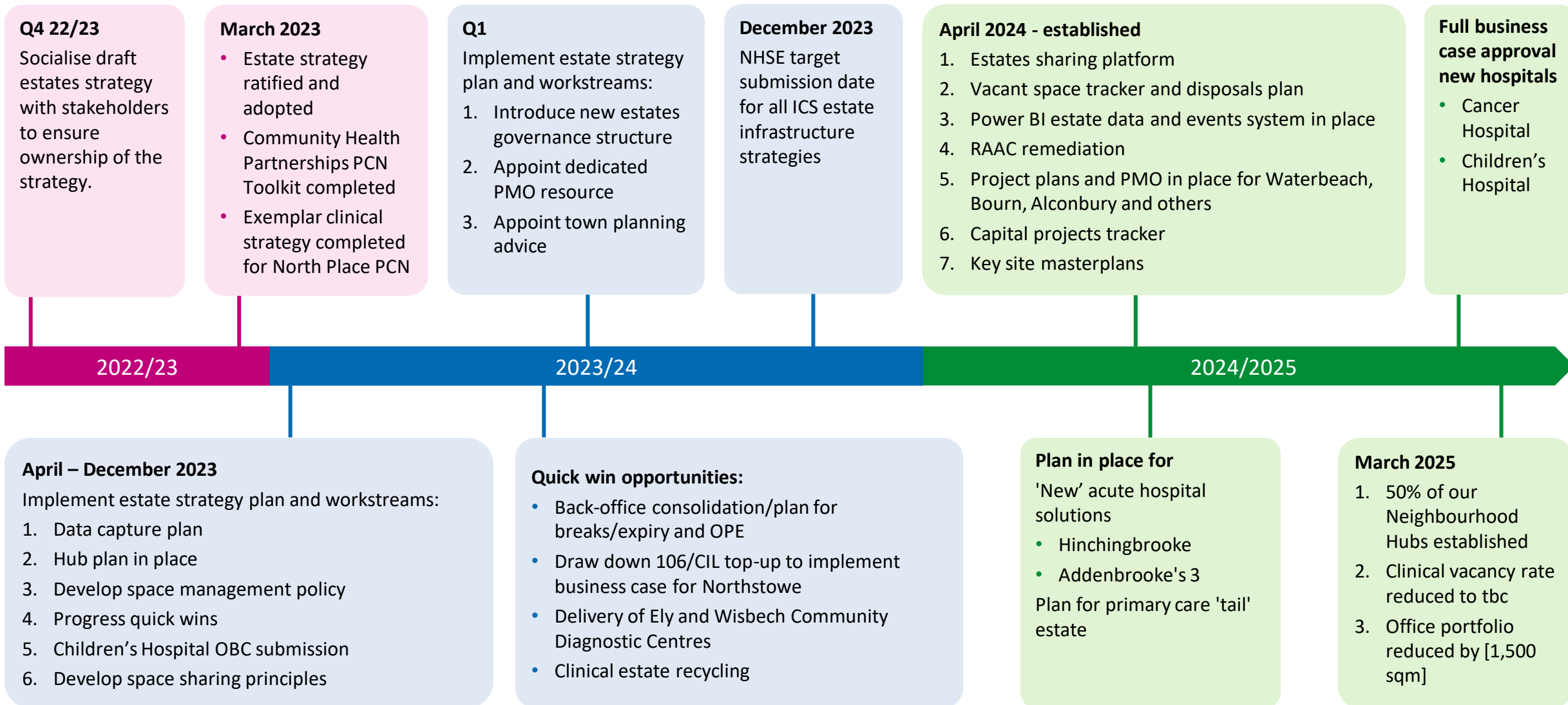


Hub and spoke

- Ensure there is the correct geographical reach based on population health
- Support of NHS Trusts to sign up to the Hub and Spoke model
- NHS Trusts working more closely with General Practice across contracts, pathways, workforce etc.
- Aligned approach with wider primary care services: Pharmacy, Optometry and Dentistry.
- Modelling for key system estates scenarios, with discussions on options and prioritisation

Embed the four areas of Community Pharmacy Services: essential, advanced, enhanced and private or commissioned services

High-level delivery plan: 2 year plan





Speaking Now...

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Neil Mcelduff

Interim Director of Estates -
Coventry and Warwickshire
ICB

Net carbon zero and the ICS

Neil McElduff

The ICS and Climate Change

The Health and Care Act 2022 came into force from 1st July 2022 and established ICBs as statutory bodies. England became the first country in the world to have targets around climate change to be embedded into the country's health legislation.

14Z44

Duties as to climate change etc

- (1) Each integrated care board must, in the exercise of its functions, have regard to the need to—
 - (a) contribute towards compliance with—
 - (i) section 1 of the Climate Change Act 2008 (UK net zero emissions target), and
 - (ii) section 5 of the Environment Act 2021 (environmental targets), and
 - (b) adapt to any current or predicted impacts of climate change identified in the most recent report under section 56 of the Climate Change Act 2008.
- (2) In discharging the duty under this section, integrated care boards must have regard to guidance published by NHS England under section 13ND.

Birmingham and Solihull ICS

- Birmingham and Solihull Integrated Care System (BSol ICS) has an 80,000-strong workforce and serves an urban and semi-urban population of 1.3 million people over an area of just 171 square miles in the West Midlands region.
- Being a predominantly urban environment, our ICS region has air quality issues, coupled with high levels of deprivation. The fact that 40% of Birmingham and 12% of Solihull residents live in the most deprived communities in Britain and that one in three children in Birmingham are living in poverty cannot be something we accept.
- This is further exemplified by the fact that Birmingham has the highest infant mortality rate of all local authorities in the country. Coronary heart disease, lung cancer and alcoholic liver disease are amongst the main causes of early adult death.
- Birmingham City Council, Solihull Metropolitan Borough Council and Birmingham Children's Trust provide local services within our ICS region, and the West Midlands Combined Authority devolves central government decision making to the locality. All of these organisations are key partners within our ICS, and all three local authorities have declared Climate Emergencies, committing their regions to achieve Net Zero by 2041.
- The population is served by five secondary care NHS Trusts (including the largest NHS Trust in England), providing acute medical and mental health care and services, and a Primary Care Network of GPs, dentists, community pharmacies and optometrists.
- In addition to the statutory health and care services, the voluntary sector plays an important role in delivering care in the community

A starting point

- In 2021 AA Projects were commissioned to produce an Annual Sustainability Report
- A starting point in terms of collating the data from across the organisations which sit within the ICS.
- Providing a gap analysis
- Setting a baseline for the organisations to report against
- Overall ICS data:

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Trend vs 18/19	Trend vs Baseline
Electricity Consumed (kWh)	82,605,022	73,612,388	82,204,305	79,831,239	79,159,251	73,990,675	Down	Down
Gas Consumed (kWh)	260,495,454	255,453,495	242,291,574	236,482,429	239,186,505	245,880,593	Up	Down
Oil Consumed (kWh)	177,880	714,028	1,648,017	2,303,564	1,150,710	1,737,388	Up	Up
Water Consumption (m ³)	895,047	789,848	792,571	871,168	895,234	856,339	Down	Down

Green Plan Vision: net carbon zero by 2040

- **Net Zero:** resource consumption and Greenhouse Gas (GHG) emission reductions that align with NHS net zero targets and mitigate against climate change.
-
- **Climate Resilience:** adaptation strategies that strengthen the Trust's ability to maintain quality care and provide a basis for us to become a climate change resilient organisation.
-
- **Social Value:** actions that influence the collective social wellbeing of patients, staff and surrounding community.

Current status

- ICS to formally approved Green Plan in September
- Governance structure within ICS approach established
- Trust plans submitted January 2022
- ICS Green Plan revised to embed Trust initiatives
- Aims and Targets have expanded (9 now – 5 in report)
- Embedded in ICS business plan
- 5 System ICS wide work streams
- 4 Trust led works streams
- Local authorities engaged in process

Workstreams

The ICS Green Plan is split into 9 categories to deliver a net carbon zero ICS. It recognizes that this issue pervades everything that we do. Each category has a list of targets to achieve..

- Workforce and systems leadership - System deliverable
- Sustainable models of care - System deliverable
- Digital transformation - System deliverable
- Medicines - System deliverable
- Supply Chain and procurement - System deliverable
- Estates and facilities (inc. Waste) - Trust deliverable
- Transport and travel - Trust deliverable
- Food and nutrition - Trust deliverable
- Climate adaptation - Trust deliverable

Some challenges

- ICS – the ICS is a new organisation with new leadership- limited traction
- Effective collaboration amongst partners
- Engagement of primary care (nearly 300 practices)
- PFI contracts
- Staff engagement across the system
- Finance and resources

Opportunities

- BEIS (Business Energy and Industrial Strategy) funding strategic outline case where could develop public heat networks - capital cost very high - Phase 2 – now moving forward
- Supply chain management – project to ensure we have a green supply chain underway (60% of the carbon footprint)
- Innovation: UHB developed a bio-digester turning food waste into energy
- Innovation: National Express launched a portal for discounted public transport across BSOL for NHS staff
- Sharing best practice – benchmarking Trust plans against national benchmarks
- Development of risk register

Key learning points

- To increase the chance of success in achieving net zero targets, Trusts should work together at ICS level to maximize scale and opportunity
- Time should be invested to develop a comparable ICS wide net zero baseline to understand 'where are we now'
- A net zero champion should be nominated at ICS level to provide focus and leadership in this area
- Engagement at all levels
- Carbon literacy – training programme appropriate to all levels

Thanks for listening

Any questions?



Speaking Now...

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Alan Carr

Senior Sustainability Adviser -
Sustainability West Midlands

Climate Change Adaptation in the NHS

The NHS Estates & Facilities Conference 2023

6 July 2023



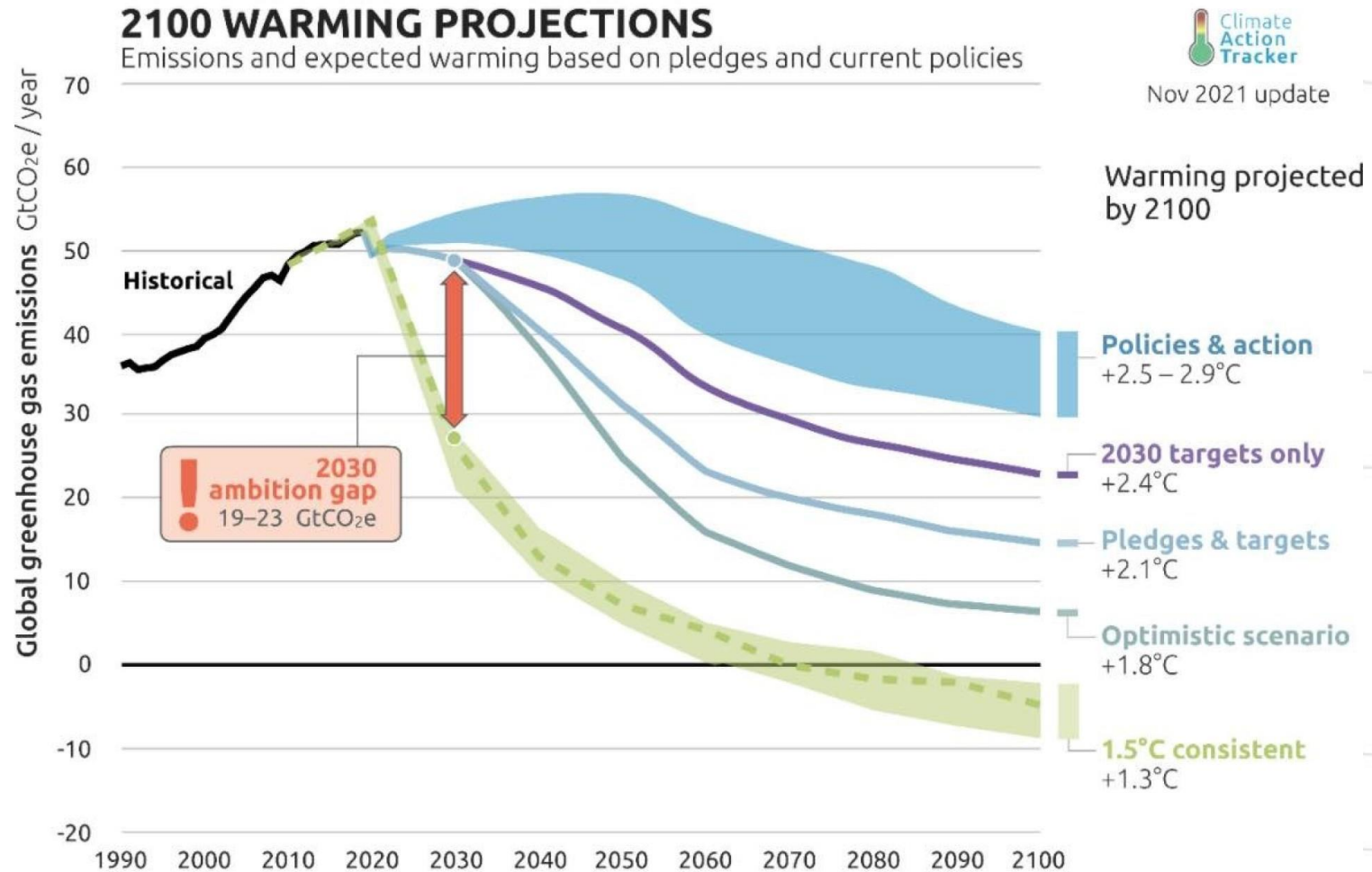
Summary

- Adaptation is about protecting our assets, buildings, businesses, people, environment and society from the worst projected impacts of climate change.
- *“Adaptation refers to adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects.”* – UNFCCC.
- Impacts will still happen regardless of our efforts with Net Zero / carbon reduction.
- Making radical changes – like we did for the Covid-19 pandemic.
- Key things to expect:
 - More intense/prolonged heatwaves
 - More frequent and intense flash flooding
 - More frequent flooding of water courses
 - More extreme events (e.g. storms).
 - Longer periods of drought.

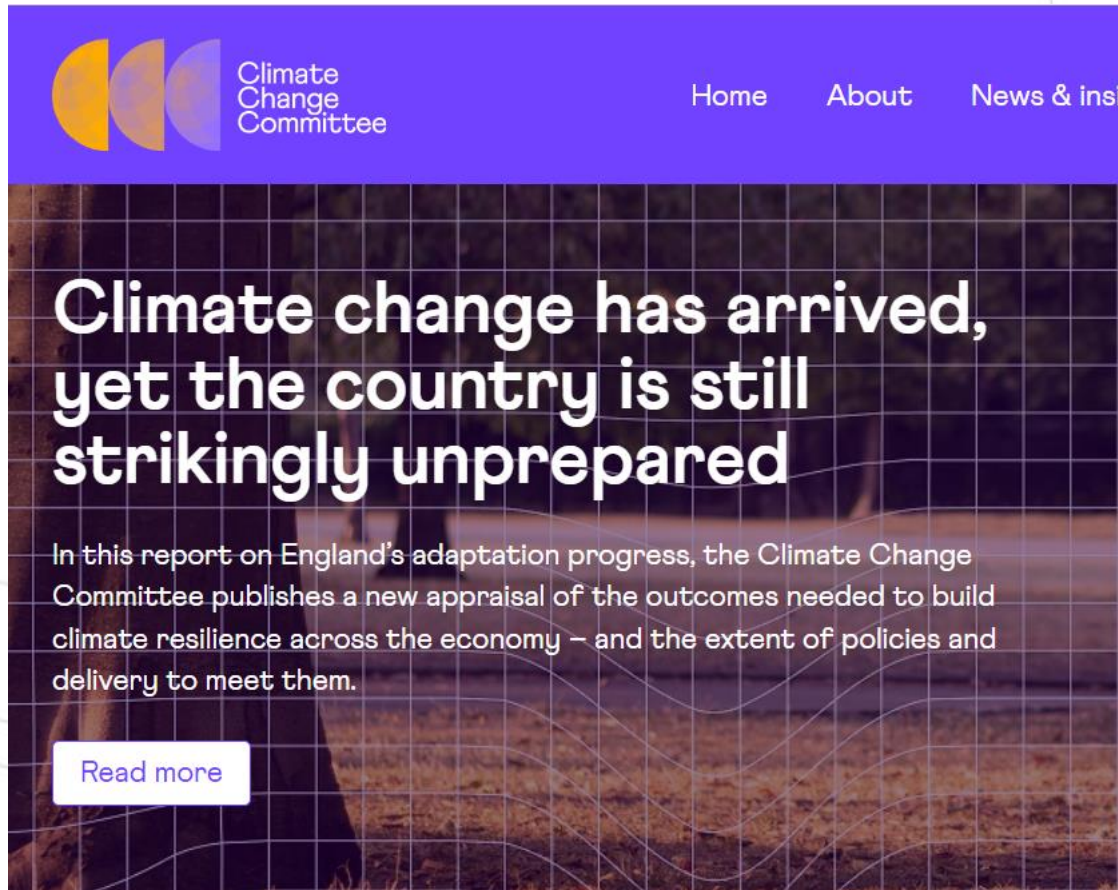


Wider context

- Under current policies and action the Climate Action Tracker estimates by the end of this century, warming will be as high as 2.9°C globally.
- The change we have already locked in combined with the future projections results in a bleak picture the further into the future we go.



Policy context



The banner features the Climate Change Committee logo on the left, which consists of three overlapping semi-circles in yellow, orange, and blue. To the right of the logo are the navigation links: Home, About, and News & insights. The main headline is in large white text: "Climate change has arrived, yet the country is still strikingly unprepared". Below this is a sub-headline in smaller white text: "In this report on England's adaptation progress, the Climate Change Committee publishes a new appraisal of the outcomes needed to build climate resilience across the economy – and the extent of policies and delivery to meet them." At the bottom left is a white button with the text "Read more". The background is a photograph of a field with a fence and trees, overlaid with a white grid pattern.

Climate Change Committee

Home About News & insights

Climate change has arrived, yet the country is still strikingly unprepared

In this report on England's adaptation progress, the Climate Change Committee publishes a new appraisal of the outcomes needed to build climate resilience across the economy – and the extent of policies and delivery to meet them.

[Read more](#)



The banner features the UK Climate Risk logo at the top left, with "UK CLIMATE" in white and "RISK" in red. To the right are navigation links: HOME, ABOUT, INDEPENDENT ASSESSMENT (CCRA3), NEWSROOM, and LEARN MORE. The main headline is in large white text: "Independent Assessment of UK Climate Risk (CCRA3)". Below this is a sub-headline in smaller white text: "Read our comprehensive assessment of the risks and opportunities facing the UK from climate change." The background is a photograph of a field with tall grasses, overlaid with a red grid pattern and a red arrow pointing to the right.

UK CLIMATE RISK

HOME ABOUT INDEPENDENT ASSESSMENT (CCRA3) NEWSROOM LEARN MORE

Independent Assessment of UK Climate Risk (CCRA3)

Read our comprehensive assessment of the risks and opportunities facing the UK from climate change.

Technical Report

Department for Environment Food & Rural Affairs

The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting

Making the country resilient to a changing climate

July 2018



A photograph showing a sunset over a landscape with trees and buildings, with the sun low on the horizon and rays of light breaking through the clouds.

N1 Risks to terrestrial species and habitats	N2 Risks to terrestrial species and habitats from pests, pathogens and INNS	N4 Risk to soils from changing conditions, including seasonal aridity and wetness	N5 Risks to natural carbon stores and sequestration from changing conditions	N6 Risks to and opportunities for agricultural and forestry productivity	N7 Risks to agriculture from pests, pathogens and INNS	N8 Risks to forestry from pests, pathogens and INNS	N11 Risks to freshwater species and habitats
N12 Risks to freshwater species and habitats from pests, pathogens and INNS	N14 Risks to marine species, habitats and fisheries	N16 Risks to marine species and habitats from pests, pathogens and INNS	N17 Risks and opportunities to coastal species and habitats	I7 Risks to infrastructure networks from cascading failures	I2 Risks to infrastructure services from river and surface water flooding	I5 Risks to transport networks from slope and embankment failure	I8 Risks to public water supplies from reduced water availability
I1 Risks to transport from high and low temperatures, high winds, lightning	H1 Risks to health and wellbeing from high temperatures	H3 Risks to people, communities and buildings from flooding	H4 Risks to people, communities and buildings from sea level rise	H6 Risks and opportunities from summer and winter household energy demand	H8 Risks to health from vector-borne diseases	H11 Risks to cultural heritage	H12 Risks to health and social care delivery
H13 Risks to education and prison services	B1 Risks to business sites from flooding	B2 Risks to business locations and infrastructure from coastal change	B6 Risks to business from disruption to supply chains and distribution networks	ID1 Risks to UK food availability, safety, and quality from climate change overseas	ID5 Risks to international law and governance from climate change overseas that will impact the UK	ID4 Risks to the UK from international violent conflict resulting from climate change	ID9 Risk to UK public health from climate change overseas
ID7 Risks from climate change on international trade routes	ID10 Risk multiplication from the interactions and cascades of named risks across systems and geographies	N3 Opportunities from new species colonisations in terrestrial habitats	N9 Opportunities for agricultural and forestry productivity from new species	N10 Risks to aquifers and agricultural land from sea level rise, saltwater intrusion	N15 Opportunities for marine species, habitats and fisheries	N18 Risks and opportunities from climate change to landscape character	I3 Risks to infrastructure services from coastal flooding and erosion
I4 Risks to bridges and pipelines from flooding and erosion	I6 Risks to hydroelectric generation from low or high river flows	I7 Risks to subterranean and surface infrastructure from subsidence	I7 Risks to energy generation from reduced water availability	I10 Risks to energy from high and low temperatures, high winds, lightning	I13 Risks to digital from high and low temperatures, high winds, lightning	H2 Opportunities for health and wellbeing from higher temperatures	H5 Risks to building fabric
H7 Risks to health and wellbeing from changes in air quality	H9 Risks to food safety and food security	H10 Risks to health from poor water quality and household water supply interruptions	B3 Risks to businesses from water scarcity	B5 Risks to business from reduced employee productivity – infrastructure disruption and higher temperatures	B7 Opportunities for business – changing demand for goods and services	N13 Opportunities to marine species, habitats and fisheries	I11 Risks to offshore infrastructure from storms and high waves
B4 Risks to finance, investment, insurance, access to capital	ID8 Risk to the UK finance sector from climate change overseas	ID2 Opportunities for UK food availability and exports	ID3 Risks to the UK from climate-related international human mobility	ID6 Opportunities (including Arctic ice melt) for international trade routes			

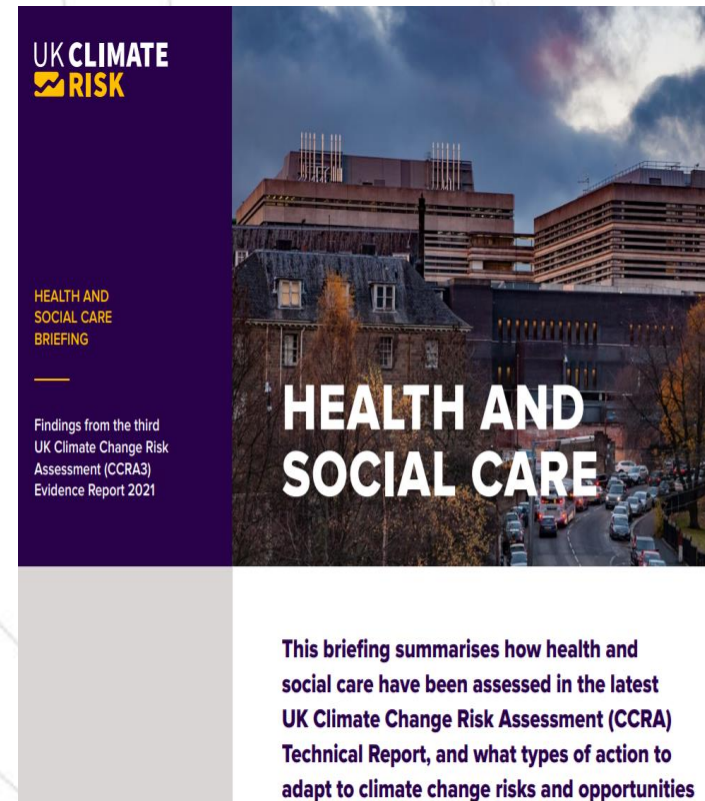
● More Action Needed
 ● Further Investigation
 ● Sustain Current Action, Watching Brief

Most urgent risks



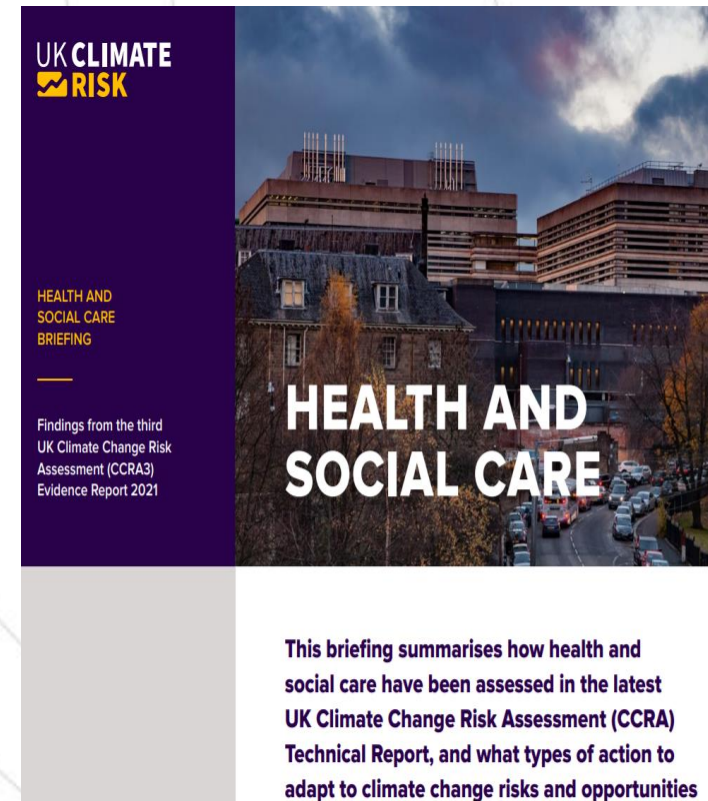
Key messages: Health and social care 1

- The health and social care systems across the UK are made up of people, buildings, infrastructure networks, equipment and service provision, with numerous providers – all of which will be affected by climate impacts.
- High temperatures lead to both increases in heat-related deaths and illness, and emergency service disruption from longer response times.
- Vulnerable people being exposed to high temperatures in hospitals, care homes and when receiving homebased care is of particular concern.
- Warmer winters should reduce burdens on the NHS in winter from cold-related deaths to some extent, though they are projected to remain high even with climate change, and preparations for cold weather will remain important.



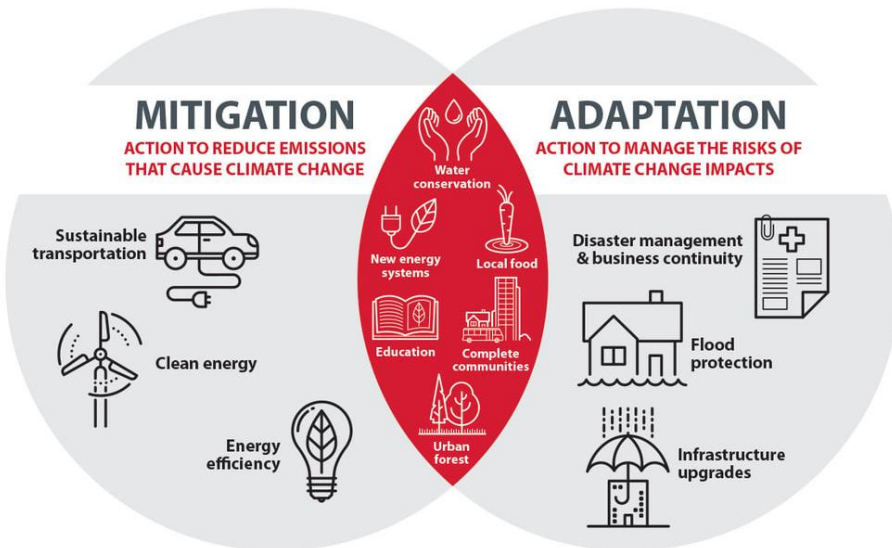
Key messages: Health and social care 2

- Hospitals, GP surgeries, care homes and emergency services stations will become increasingly exposed to flooding without additional adaptation measures.
- The health and social care system in the UK could also be put under greater pressure from increases in health-related impacts from vector-borne diseases, poor air quality, and poor water quality or water supply interruptions as the climate changes.
- Health inequalities mean that the health risks from climate change are not evenly distributed.



So what sort of actions do we need to take?

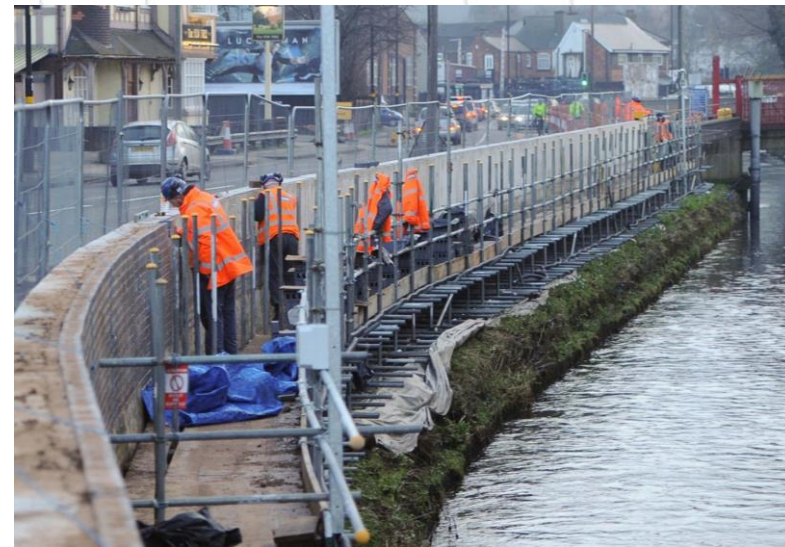
Building Climate Resilience



- Hard interventions
 - E.g. building modifications and infrastructure strengthening
- Quick(ish) wins
 - E.g. updating H&S guidance or awareness campaigns
- Integration
 - E.g. improving ventilation to assist with overheating risk and emissions reductions
- Nature-based solutions
 - E.g. tree planting programmes that consider overheating/flood risk *as well as* biodiversity/Net Zero aspects



River corridor and city centre nature based solutions
<https://gehlinstitute.org/work/climate-adaptation-planning-and-public-life/>



Flood defences on River Tame, Birmingham



Solar shading for buildings

Example actions (taken from CCC)

Independent Assessment of UK Climate Risk (CCRA3)	Examples
Engineered solutions	Building design and retrofit, road resurfacing, flood defence investment, drainage
Nature-based solutions	Increasing plant diversity, habitat creation, soil conservation, increased blue carbon (coastal and marine vegetation), green sustainable urban drainage, urban greening, and peatland restoration
New technologies	Precision farming, using new crop and livestock varieties, remote sensing, new designs for infrastructure assets, use of sensing, digitisation and big data for monitoring, evaluation and management
Behavioural	Changing timing of agricultural practices, information sharing, public engagement, skills development in adaptation actions
Institutional	Adaptation standards, supply chain diversification, regulation, advisory services
Financial	Insurance, risk disclosure, adaptation finance
Data, R&D	Monitoring and surveillance, inspections, forecasting, research, decision support tools

What the we/the NHS is doing

- Greener NHS Third Health and Social Care Adaptation Report 2021: <https://bit.ly/3KFcE5h>
- NHS Forest: <https://nhsforest.org/>
- Practical examples and good practice on adaptation (let us know if you can share anything!)
- Guidance for Trusts on developing an adaptation plan (published by end of the year)
- Online event so Trusts can learn from examples of good practice and get support: <https://shorturl.at/koAH1>

Third Health and Care Adaptation Report

December 2021



What you / your Trust can do – initial quick wins

- Integrate climate risk into your risk assessments
- Integrate adaptation measures into Net Zero and other related project activity
- Use our new guide as a template to produce your own adaptation plan
- Use our new case study compendium to learn from others copy ideas
- [Attend our event](#) on this topic specifically for Trusts – 12 September
- Use today to ask questions and gain ideas on where to start.

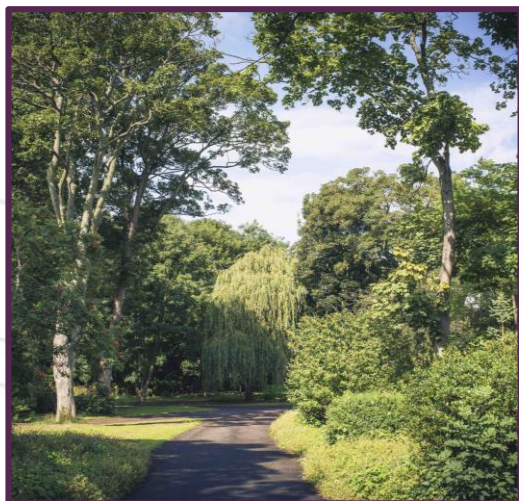


What you / your Trust can do – example actions

Basildon Hospital, Essex: Sustainable Urban Drainage System
Reduces flood risk and water pollution, improves wellbeing, provides shading and natural cooling of an area, carbon capture.



Milton Keynes University Hospital: Improving insulation during Solar PV installation
Using existing projects (decarbonisation actions) to also carry out adaptation.



'Long View' project: Newcastle Hospitals
Part of the 'Flourish' staff wellbeing initiative, creating green spaces and restoring habitats that will provide Nature Based Adaptation. A way to raise funds for adaptation from the local community.

Thank you

Alan Carr, Senior Sustainability Adviser

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www.swm.org.uk

More on our adaptation work in the West Midlands:

<https://www.sustainabilitywestmidlands.org.uk/resources/category/swm-reports/>

@SWMtweet

LinkedIn: Sustainability West Midlands





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Up Next...

Cohesive



Speaking Now...

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2023



David Philp

Chief Value Officer - **Cohesive**

Unlocking the potential of your
healthcare estate:
maximising
value

Dave Philp – Chief Value Officer

July 2023





#1

Why?

Context and Case for Change

A photograph of an industrial construction site at sunset. The sky is a mix of orange, yellow, and blue. In the foreground, there's a large, multi-story industrial structure under construction, with a tall crane next to it. The background shows more industrial buildings and cranes, all slightly hazy. The overall mood is one of active industrial development.

Our case for change:

The challenges of **Economic Performance, Carbon Reduction and Aging Healthcare Assets, Operational Reliability and Optimising Availability**



Our case for change:

Assurance, Safety & Risk

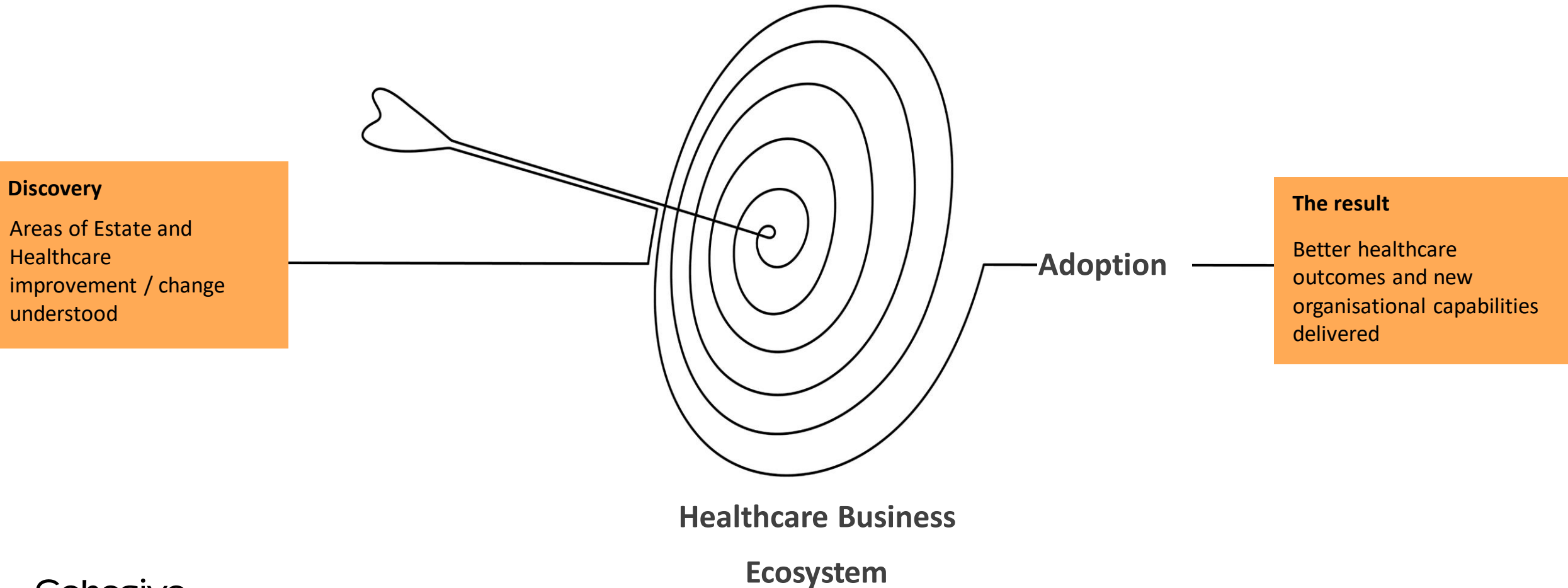
Our case for change:

Retained Estate, backlog maintenance and legacy information



Creating a line of sight between:

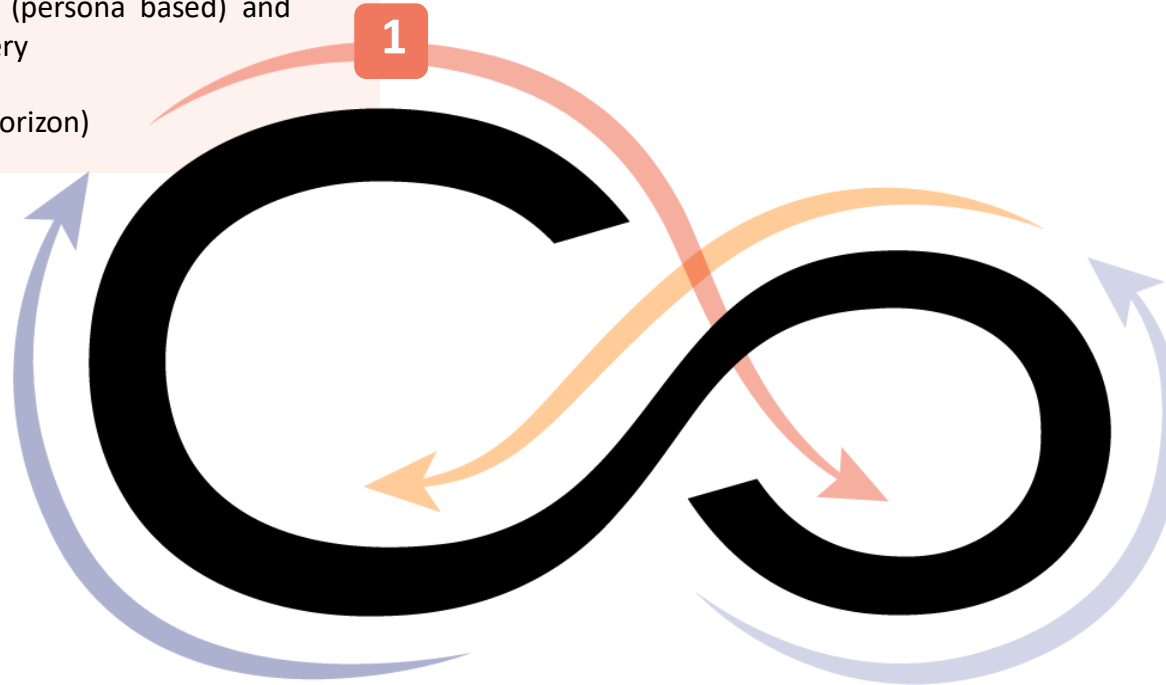
Digital and Organisational Change



Value driven digital healthcare approach

Understand the why?

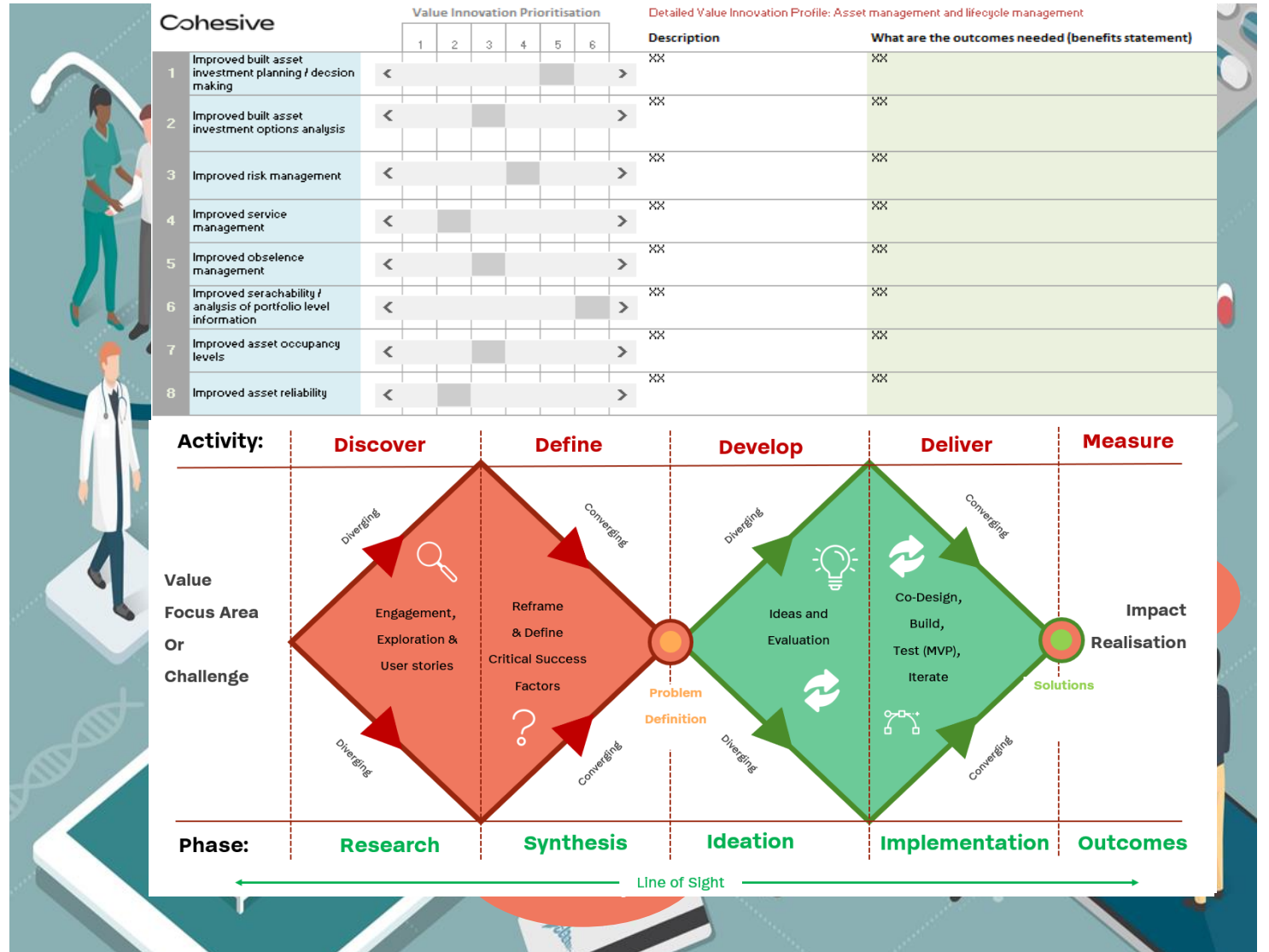
- Create clear definition of the need for change, establish the desired business outcomes, define value, success and related impact goals
- Establish multiple points of view (persona based) and user stories. People centric discovery
- Establish future objectives (multi-horizon)



Value driven digital healthcare approach

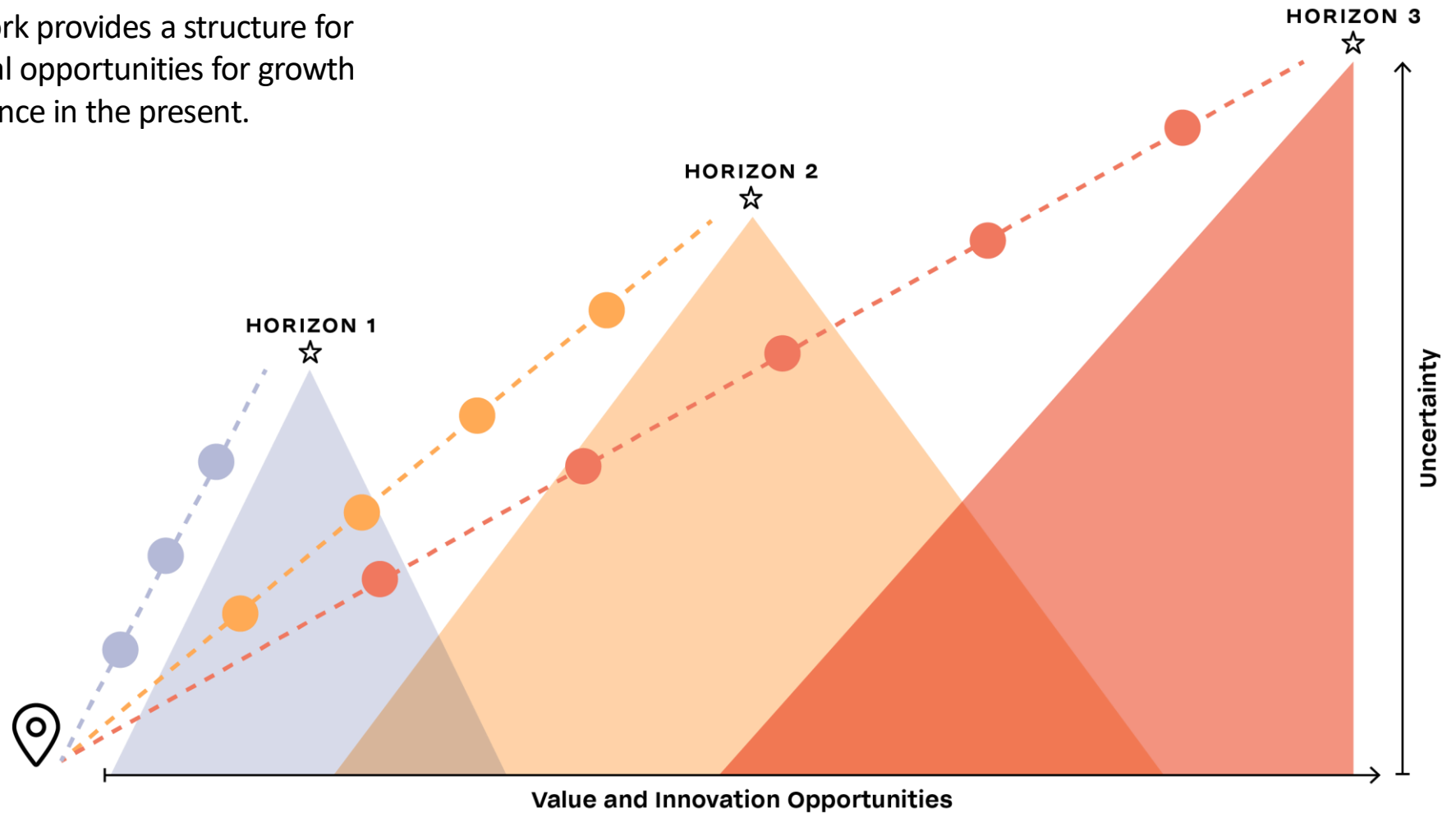
Understand the why?

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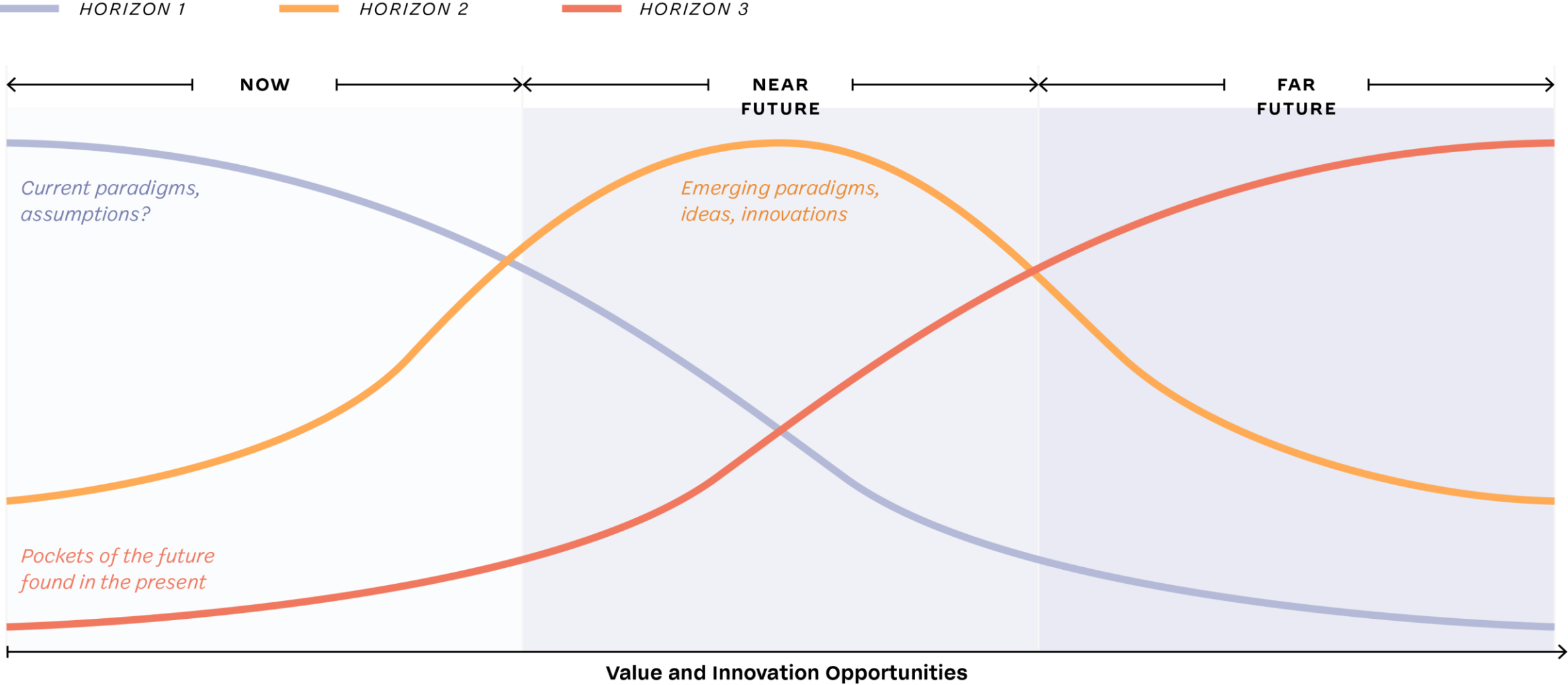
Understanding healthcare value - opportunities

The horizons-based framework provides a structure for companies to assess potential opportunities for growth without neglecting performance in the present.



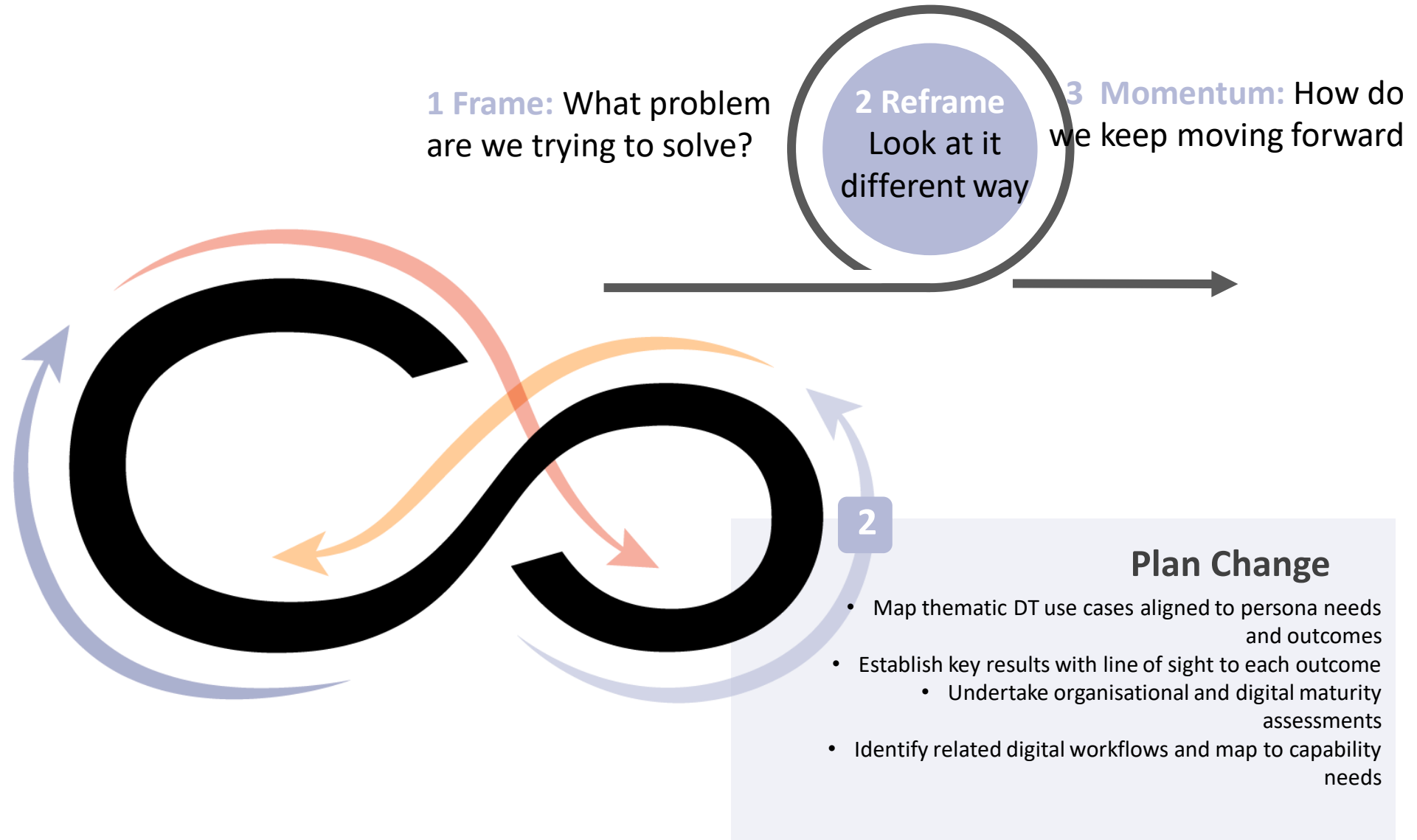
Path – work back projects to realize H1, H2 and/or H3 objectives

Understanding healthcare value - opportunities

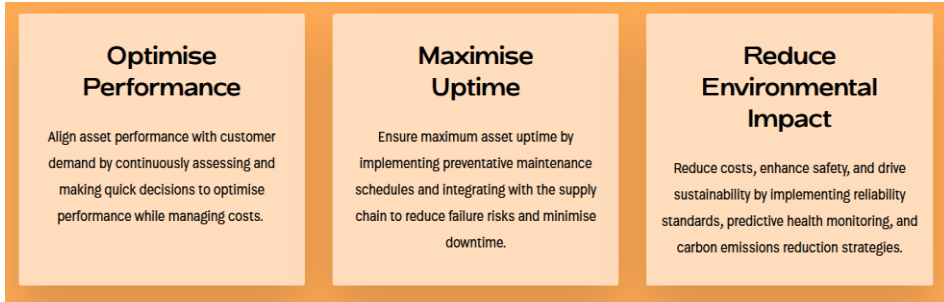


Understanding healthcare value - opportunities

The Reframing Loop



Value driven digital approach



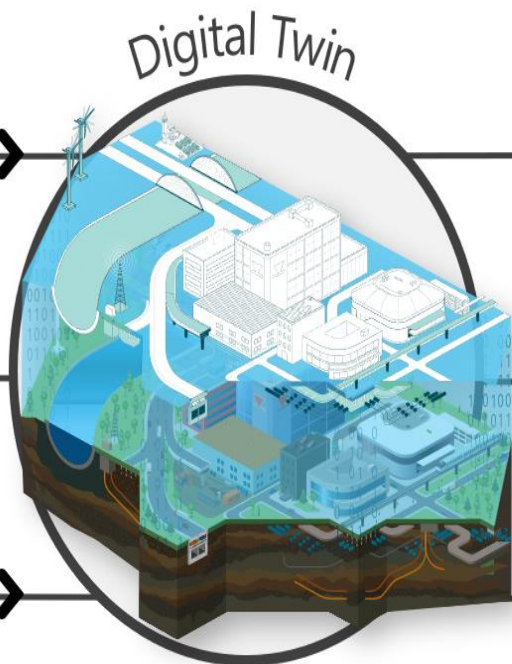
Optimisation

- Realising value
- New capability enabled against outcomes (strategic alignment - mission to value)
- Impact realisation
- Adoption by the personas
- Realise new behaviours of people
- Realise and reduce risk
- Continuous learning
- Removal of silos (ICE)
- Unlocking potential of available eco-system



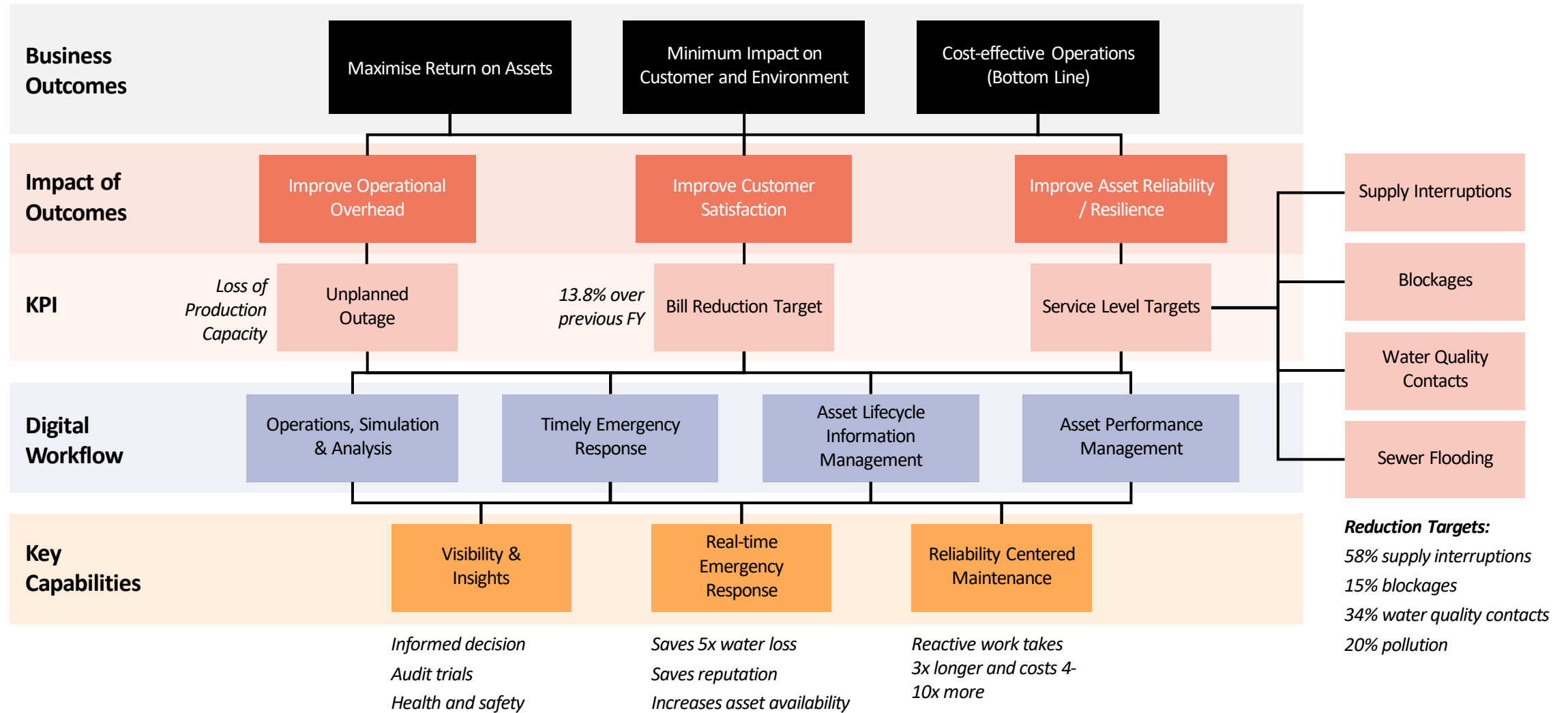
Digital twins are continuously updated with data from the physical asset. This data is used to understand and model the asset's performance.

- Engineering**
 - Specs
 - Drawings
 - Documents
 - Models
 - Analyses
 - Geotech
 - OEM specs
- Operations**
 - IoT feeds
 - Sensors
 - Drones
 - Cameras
 - LiDAR
 - Point clouds
- Information**
 - Asset tags
 - Work orders
 - Maintenance records
 - Inspection records



- 3D/XR**
Immersive Visualization
- 4D**
Timeline of Change
- AI/ML**
Analytics Visibility


Delivering Business Outcomes – Value+



What is the Digital Estate

Is an information management led approach which facilitates the **digitisation, integration and curation of appropriate digital models (unifying existing data and records)** to enable efficient management of NHSS real-estate portfolios.

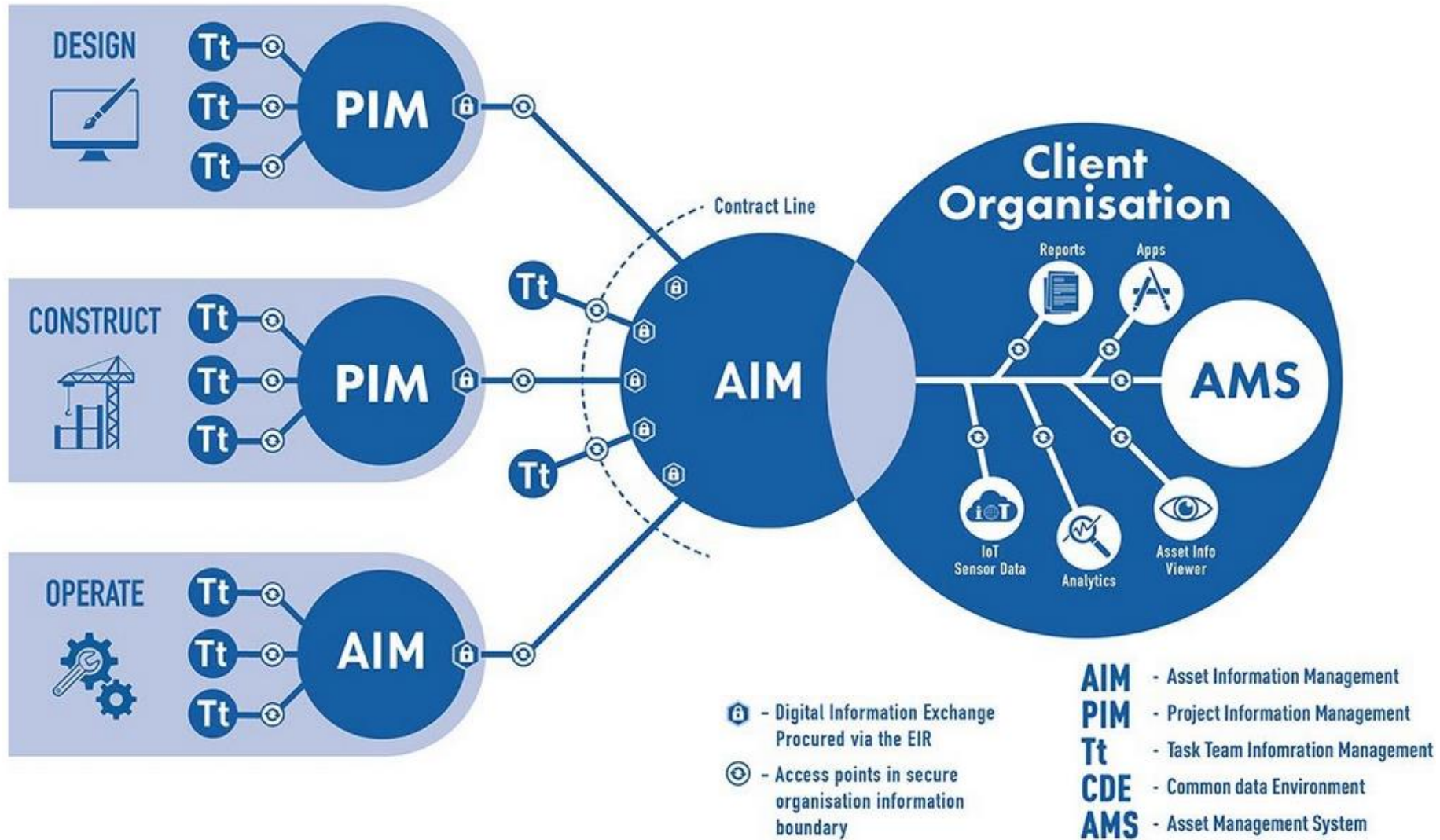
The NHSS digital estate can provide an **enterprise level source of searchable reliable information** about the boards assets supporting joined-up decision making, dynamic insights and ultimately **supporting better healthcare outcomes.**

The background of the slide features a network of white lines connecting various icons. The icons include a building, a hospital with a cross, a laptop, a smartphone, and a server rack. A dark blue circle with the NHS logo is also present.

Getting the most out of existing NHSS assets means improving how Health Boards produce, manage and use data. This is combined with integrated technologies and systems to inform strategic asset management and facilities management.



Importance of the Single Source of Truth and the CDE



Welcome to NHSScotland Digital Estate

Search
[Advanced Search](#) [Search Tips](#)

Links

Assets	Bids	Hierarchy	Locations
Map	Saved Searches	My Recent Documents	Help

My Recent Spaces

- Glasgow Royal Infirmary
- Surgical Block Refurb
- NHS Greater Glasgow & Clyde
- Bo'ness Hospital

[Show in listing](#)

My Dashboard

In

Due	Count
0 Overdue	0
1 Today	1
0 Next 7 Days	0
0 Next 28 Days	0
1 Later	1
2 Total	2

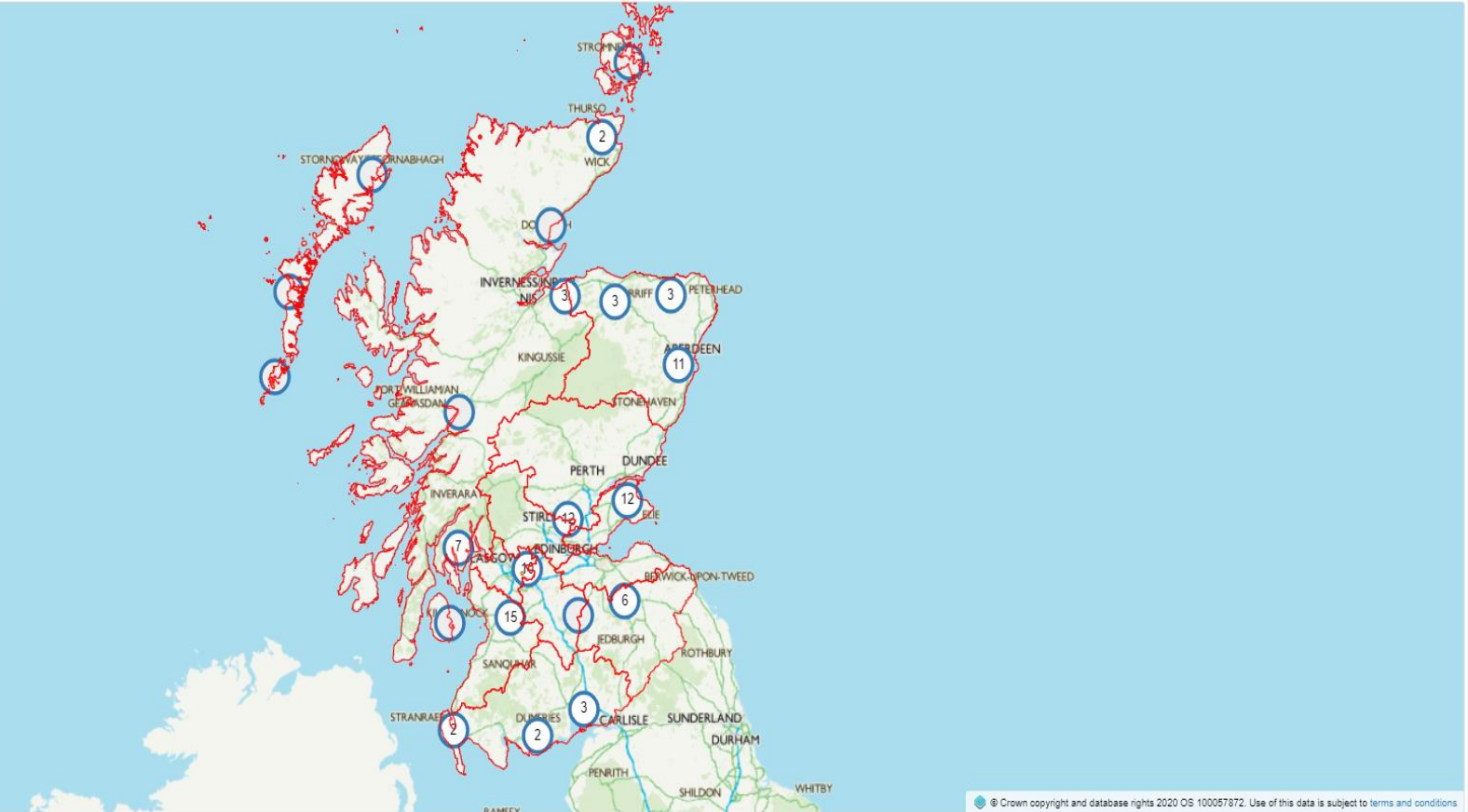
Business Collaborator

Map

Home

LAYERS

- No Category
 - Glasgow Royal Infirmary.kml [0.2]
 - Local Authority Boundaries
 - NHS Scotland Healthboards.kml
 - OS Roads
 - OS Topography



Business Collaborator

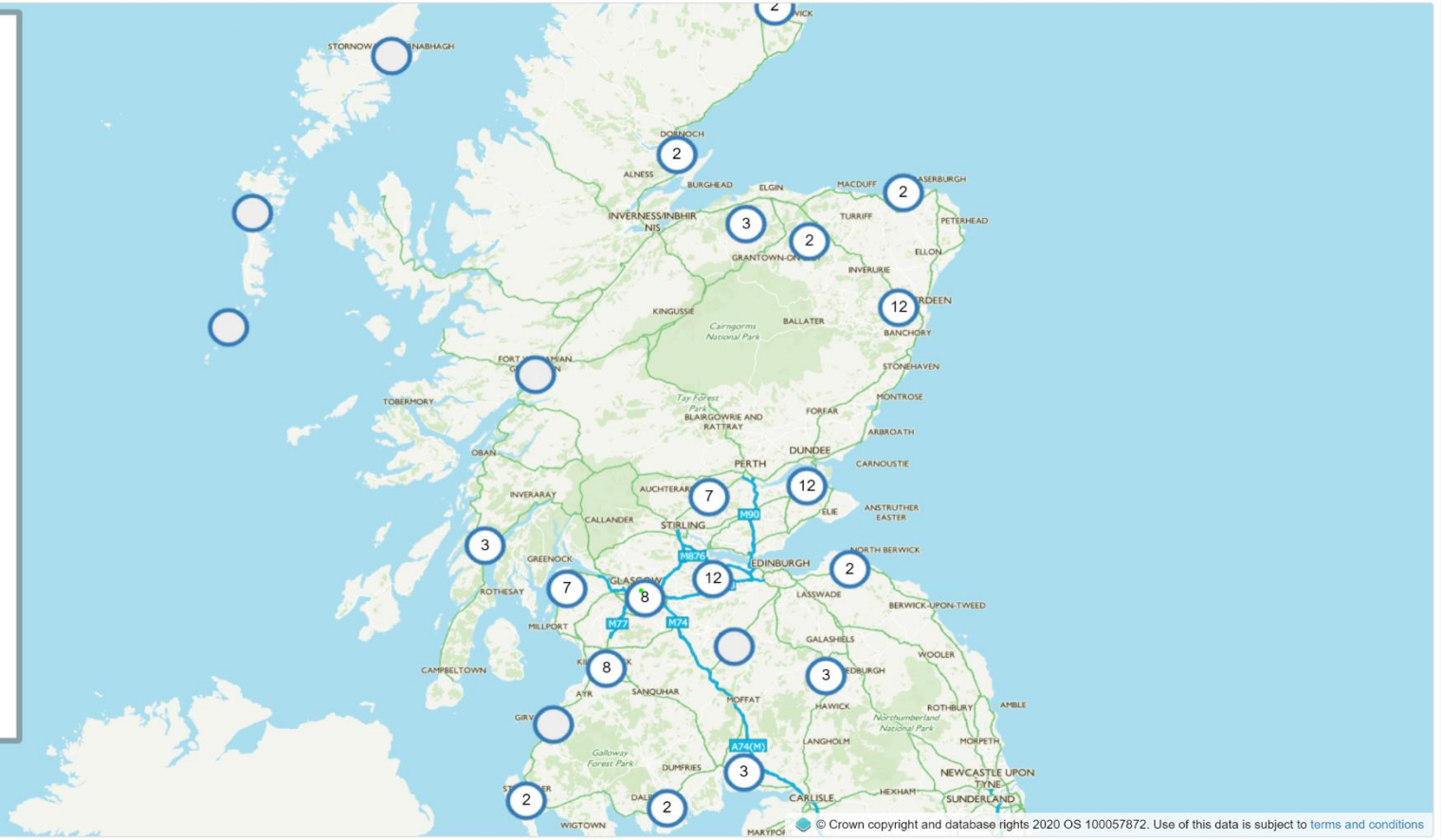
Map

Home

MY SPACES

Filter map by categories:

- NHS Board
 - Ayresshire & Arran
 - Borders
 - Dumfries & Galloway
 - Eileanain Sire Western Isles
 - Fife
 - Forth
 - Grampian
 - Greater Glasgow & Clyde
 - Highland
 - Lanarkshire
 - Lothian
 - Orkney
 - Shetland
 - Tayside



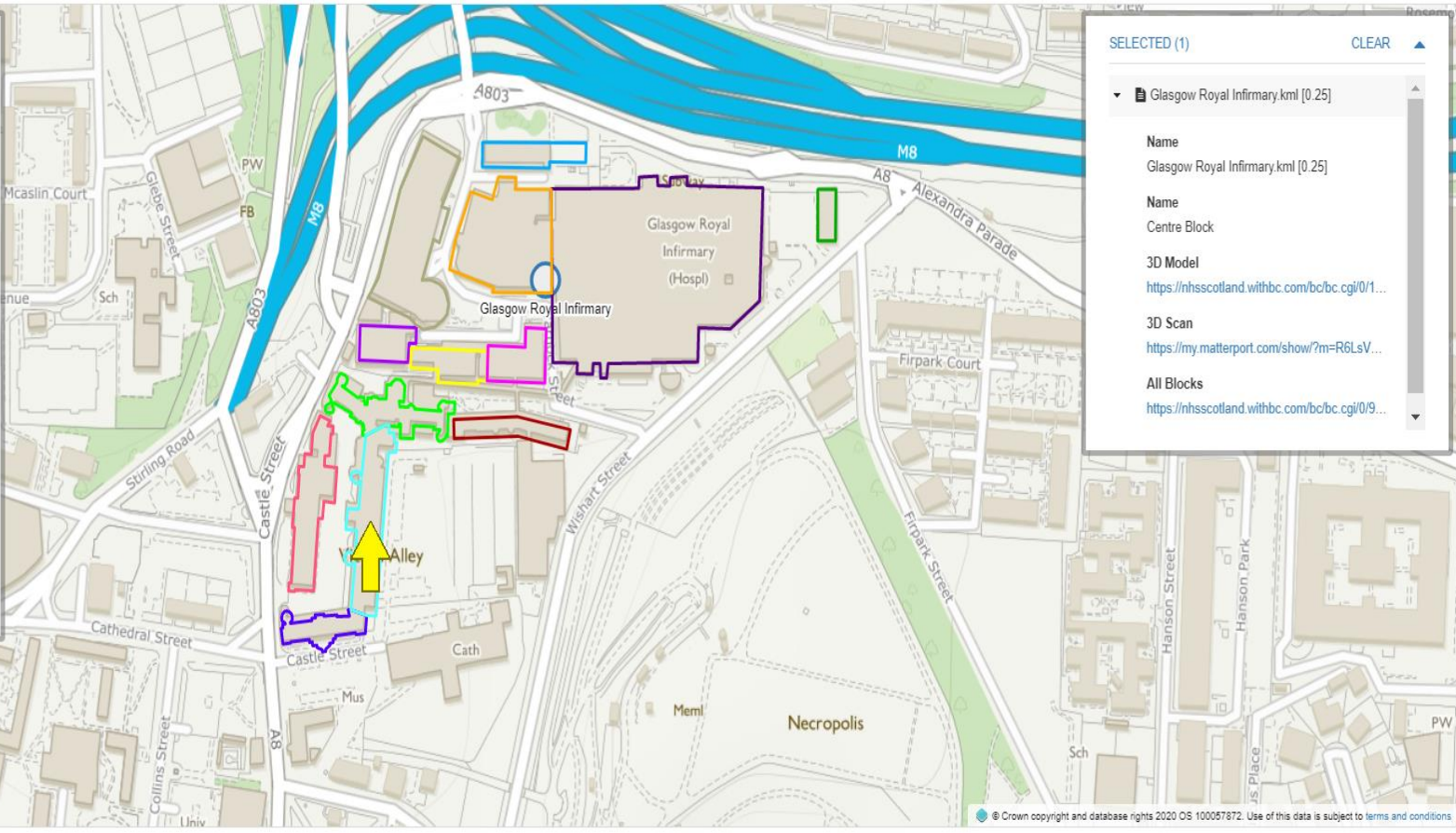
Business Collaborator

Home

Map

LAYERS

- No Category
 - Glasgow Royal Infirmary.kml [0.25]
 - Car Park
 - Centre Block**
 - Cuthbertson Building
 - Jubilee Building
 - Lister Building
 - Macewen Building
 - Medical Block
 - PSU OPD
 - Queen Elizabeth Building
 - Saint Mungo Building
 - Surgical Block
 - The Gatehouse Building
 - Walton Building
 - Local Authority Boundaries
 - NHS Scotland Healthboards.kml
 - OS Roads
 - OS Topography



SELECTED (1) CLEAR

- Glasgow Royal Infirmary.kml [0.25]
 - Name: Glasgow Royal Infirmary.kml [0.25]
 - Name: Centre Block
 - 3D Model: <https://nhsscotland.withbc.com/bc/bc.cgi/0/1...>
 - 3D Scan: <https://my.matterport.com/show/?m=R6LsV...>
 - All Blocks: <https://nhsscotland.withbc.com/bc/bc.cgi/0/9...>

Folder in Asset: Glasgow Royal Infirmary

Listing

Health and Safety File

+ Add Actions Workflow Filter Cut Copy Paste Download Delete Drop Files Here

01. Introduction



- 1.1 Purpose and Use
- 1.2 Description and Diary
- 1.3 Audit Checklist

02. Cleaning/Maintenance



- 2.1 Access Strategies
- 2.2 Specialist Requirements
- 2.3 Plant Requirements
- 2.4 PPM Schedules
- 2.5 O&M Manuals Schedule

03. As-Built Information



- 3.1 Architectural
- 3.2 Structural
- 3.3 Drainage
- 3.4 Electrical
- 3.5 Mechanical
- 3.6 Sprinklers
- 3.7 Refridgeration
- 3.8 Transportation
- 3.9 Statutory & Utilities
- 3.10 Highways

04. Certificates



- 4.1 Architectural
- 4.2 Structural
- 4.3 Drainage
- 4.4 Electrical
- 4.5 Mechanical
- 4.6 Fire System
- 4.7 Refridgeration
- 4.8 Transportation
- 4.9 Miscellaneous

05. Residual Hazards



- 5.1 Structural Principals
- 5.2 Buried, Hidden & Overhead Services
- 5.3 Ground Contamination
- 5.4 Water Bearing Strata
- 5.5 Confined Spaces
- 5.6 Fragile Materials
- 5.7 Hazardous Materials
- 5.8 Health Hazards
- 5.9 High Pressure Systems
- 5.10 Restricted Access
- 5.11 Roof Lights
- 5.12 Other Significant Risks

06. Survey's/Remediation



- 6.1 Roof Survey
- 6.2 Geotechnical
- 6.3 Geo-environmental
- 6.4 Unexploded Ordnance
- 6.5 Pest Proofing
- 6.6 Acoustic
- 6.7 Radon
- 6.8 Flood Risk
- 6.9 Waste
- 6.10 Asbestos

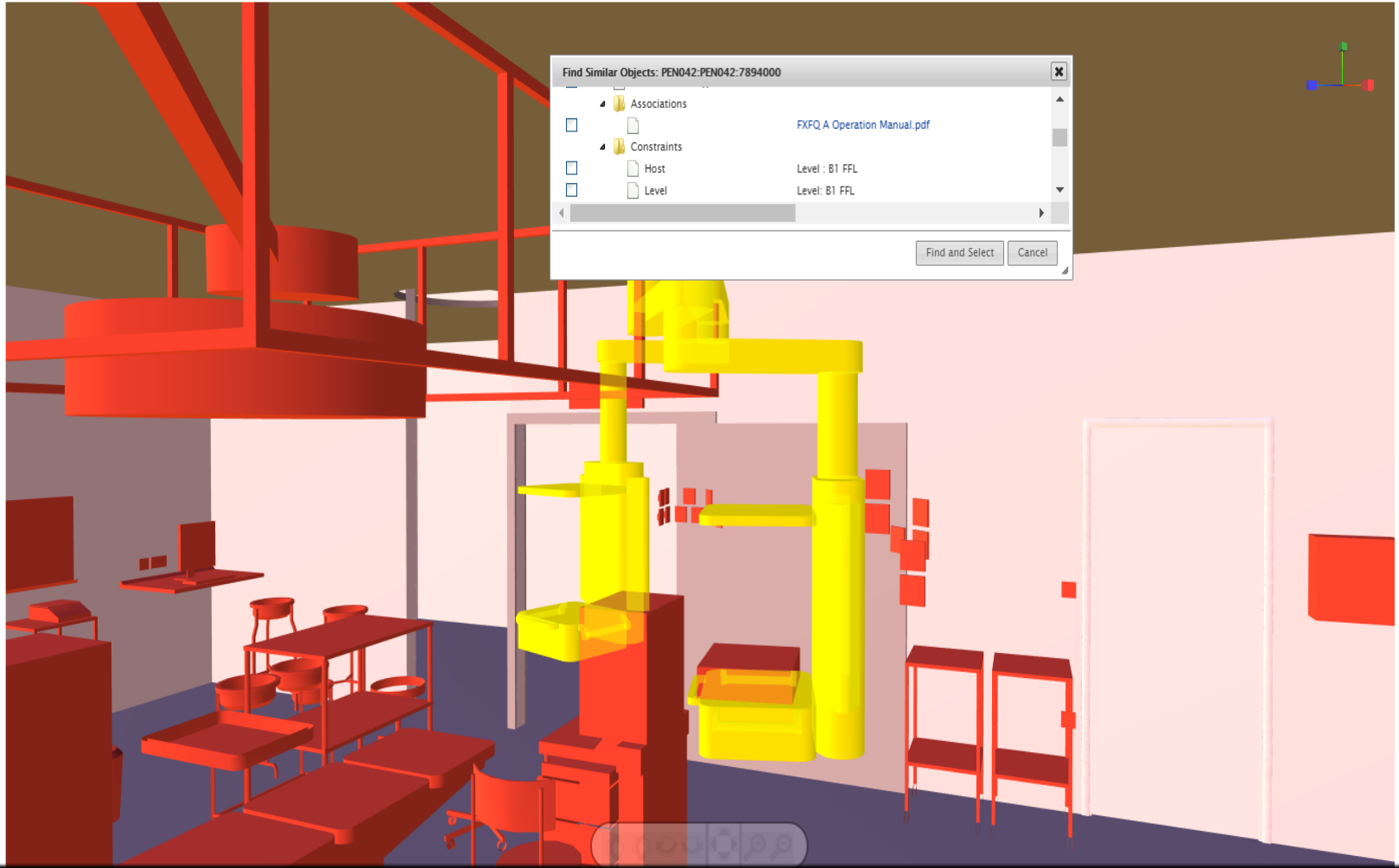
Navigation

Object Tree | IFC Categories

- PEN042: PEN042:7894000
- OUT005: OUT005:7894001
- OUT005: OUT005:7894002
- OUT005: OUT005:7894003
- OUT005: OUT005:7894004
- OUT005: OUT005:7894005
- OUT005: OUT005:7894006
- OUT005: OUT005:7894007
- OUT005: OUT005:7894008
- OUT005: OUT005:7894009
- OUT005: OUT005:7894010
- OUT005: OUT005:7894011
- OUT005: OUT005:7894012
- OUT131: OUT131:7894013
- OUT131: OUT131:7894014
- OUT131: OUT131:7894015
- OUT131: OUT131:7894016
- OUT453: OUT453:7894017
- OUT454: OUT454:7894018
- OUT461: OUT461:7894019
- OUT470: OUT470:7894020
- OUT475: OUT475:7894021

Selected

- PEN042: PEN042:7894000
 - Model Name
 - Description
 - Name
 - Compositiontype
 - Tag
 - Objecttype
 - Objectplacement
 - Representation



Find Similar Objects: PEN042: PEN042:7894000

- Associations
 - FXFQ A Operation Manual.pdf
- Constraints
 - Host Level: B1 FFL
 - Level Level: B1 FFL

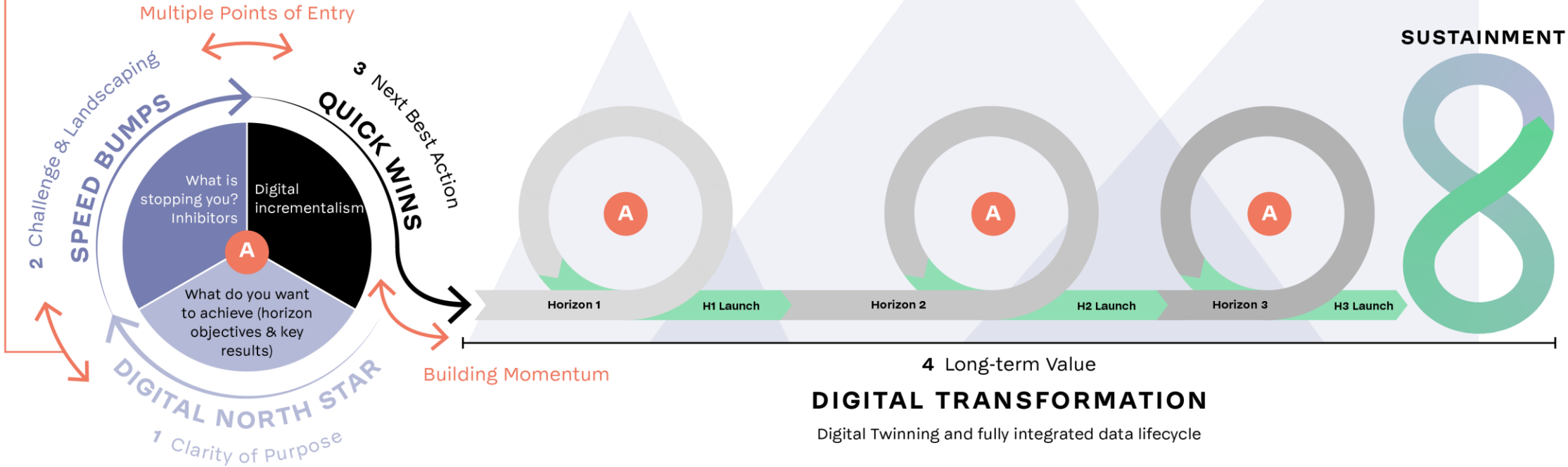
Chapter 4

Summary

Digital Transformation: Making it stick

A Align: Digital, Business & Tech Strategies

Envisioning Workshops & Value Profiling



Cohesive

Thank you

David.Philp@cohesivegroup.com



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2023





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Q&A Panel



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Morning Break



Chair Morning Reflection

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2023



Andrew Gate

Regional Delivery Director: North
East & Yorkshire Region - **NHS**
England Estates and Facilities Team



Up Next...

The NHS
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2023



LucionGroup

Protecting people and planet



Speaking Now...

The NHS **2023**
Estates &
Facilities
Conference



Kimberley Johnson
Group Head of Business
Development - **Lucion Group**



Rob Molyneux
Sustainability Unit Director
Delta-Simons Ltd - Part of the
- **Lucion Group**



Lucion
Group



DeltaSimons
Protecting people and planet

Lucion Group

NHS Convenzis - Carbon Reduction

Kimberley Johnson (Group Head of Business Development)

Rob Molyneux (Unit Director, Sustainability & ESG)

Protecting people
and planet



Kimberley Johnson

Group Head of Business Development
Lucion Services

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Rob Molyneux CEnv

Unit Director - Environmental Sustainability
Compliance

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and planet

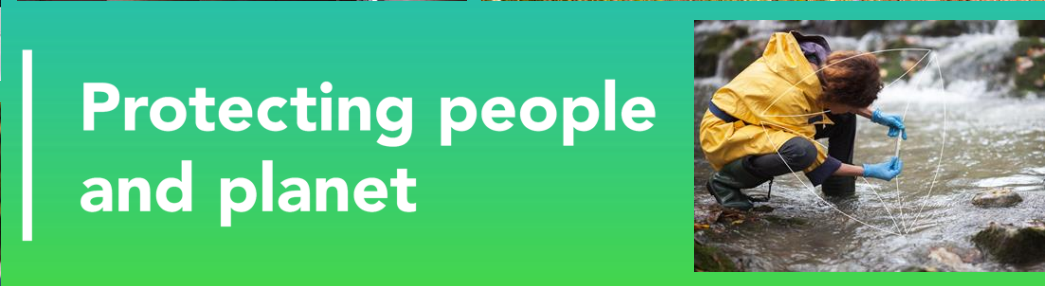


Who We Are

Lucion Group is a purpose-driven company, dedicated to protecting people from hazardous environments and protecting the environment from the impacts of people.

Through our Group of companies, we facilitate the sustainable development of clients across key sectors worldwide through risk mitigation services.

To assist our clients at every stage of their asset lifecycle journey, our Group works as three industry verticals: **inspection**, providing hazardous material testing data analysis and surveys; **assessment**, a conductor of physical onsite investigations including geoenvironmental and geotechnical studies; and **advisory**, offering environmental, sustainability and consultancy services.



Protecting people and planet



What We Do

Through our organic and acquired growth, we now offer a holistic service in any built development lifecycle.

From conception through to operation, our scientific and environmental specialists will consider the best decisions for people and planet.





How We Do It



Environmental transaction, due diligence and advisory services, land contamination, remediation, waste and environmental planning



Hazardous material field inspection and laboratory services



Geotechnical & geoenvironmental investigation



Radiation protection services



Land, building and utilities surveying





Our Work with the NHS

Lucion Group works with many NHS Trusts throughout the country. Providing various service lines to support our clients needs as a Trusted supplier.

Services include:

- Compliance and Hazardous Material Services
- Sustainability and ESG Support
- Carbon Reduction Plans for NHS supply chain partners
- Geotechnical and Geoenvironmental Services
- Measured Building Plans
- Utility Mapping and CCTV Drainage



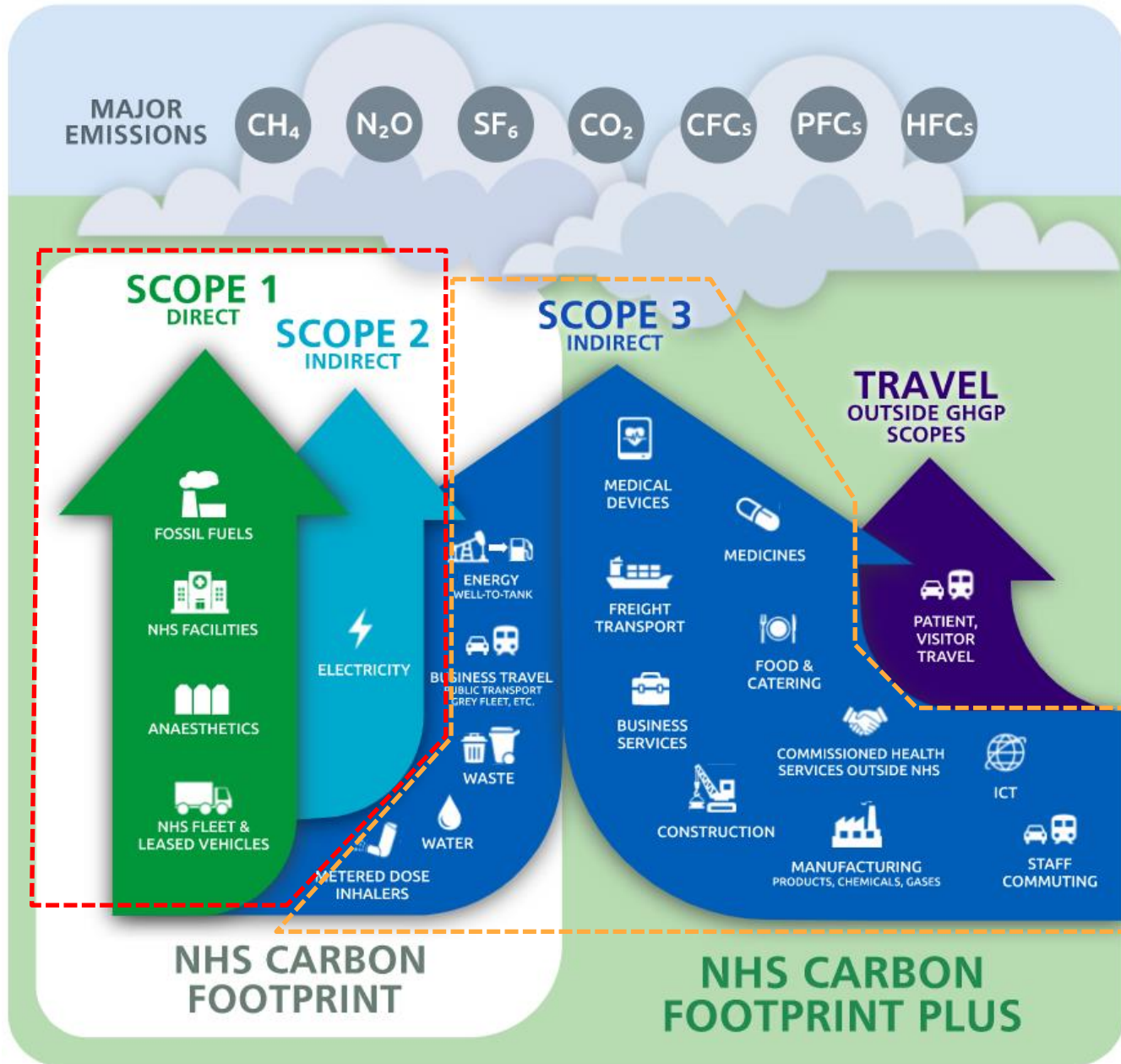


NHS

England

Delivering a 'Net Zero' National Health Service





The NHS has committed to reaching net zero by 2040 for the emissions we control directly, and by 2045 for the emissions we influence, through the goods and services we buy from our partners and suppliers.

To achieve this goal, we will require the support of all our suppliers.

All suppliers providing goods or services to the NHS are part of the NHS Scope 3 emissions and part of the NHS challenge in becoming Net Zero



NHS Net Zero Supplier Roadmap

Net zero supplier roadmap

- **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 £5m 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](#) outlines 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 &** 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 foot printing 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.



What is a Carbon Reduction Plan (PPN 06/21)

A CRP: Identifies a supplier's current carbon footprint and their plan to achieve Net Zero emissions.

To comply with PPN 06/21, the CRP must:

- Confirm a commitment to Net Zero by 2050 or earlier (2045 preferred by NHS)
- Provide current year emissions for UK operations (as minimum) for Scope 1, Scope 2 and defined subset of Scope 3 emissions
- Report emissions in CO₂e for the seven greenhouse gases covered by the Kyoto Protocol
- Set out the environmental management measures in effect (supporting journey to Net Zero)
- Be Board Approved
- Be Clearly signposted and published on the supplier website
- Be updated regularly – at least annually



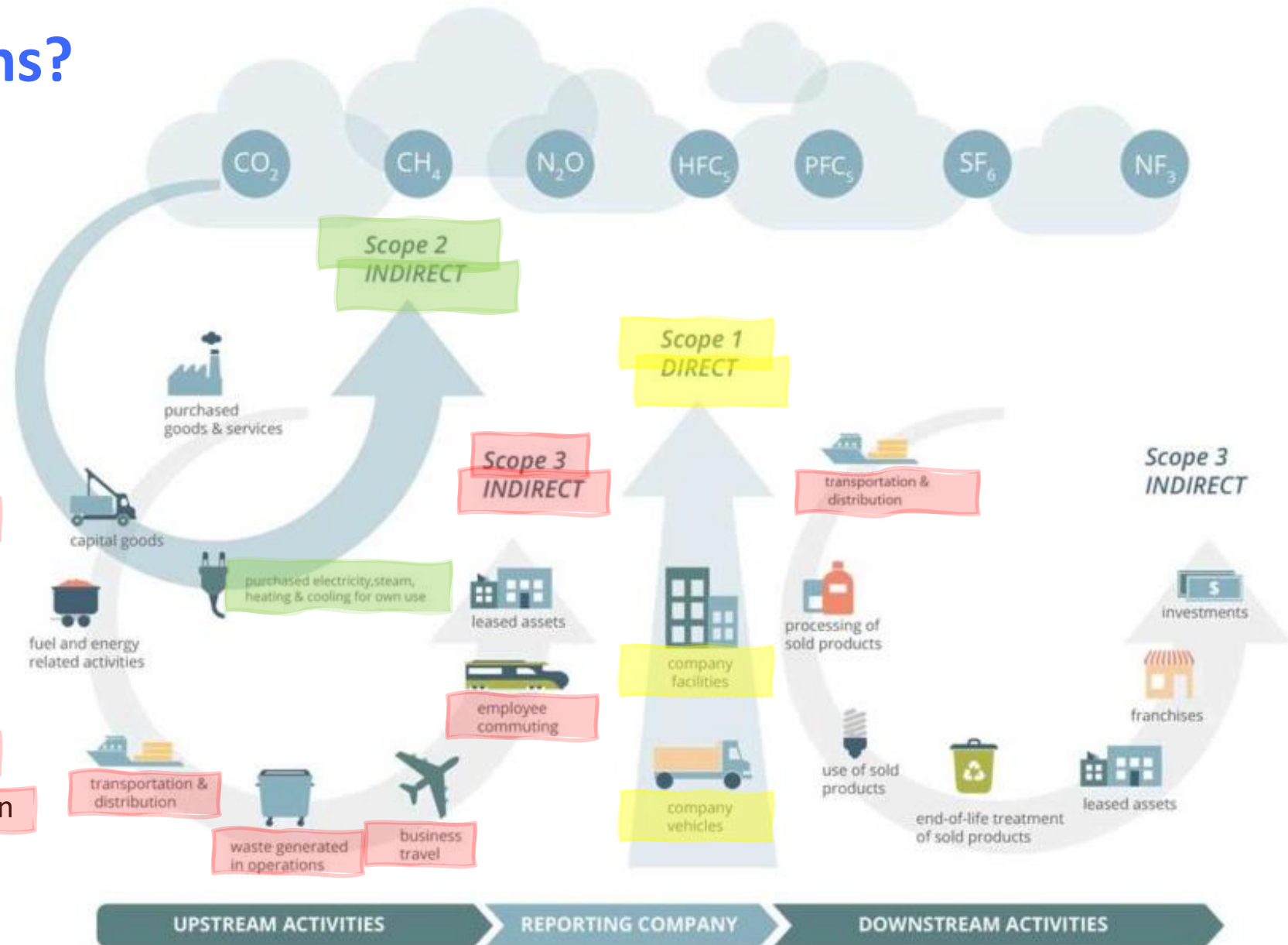
Which emissions?

Direct Emissions:

- **Scope 1**
- **Scope 2**

Indirect Emissions: Scope 3

4. Upstream Transportation & Distribution
5. Waste Generated in Operations
6. Business Travel
7. Employee Commuting
9. Downstream Transportation & Distribution





Which emissions?



- Movement of Goods & Materials into the business (Upstream)
- Delivery of products to NHS and other clients (Downstream)
- Couriers
- 3rd-party Hauliers & Shippers



- Taxis
- Flights
- Trains
- Busses



- Waste to landfill, Incineration or Recycling
- Water & Water Treatment



- Movement of your employees to their place of work



End Product?

Carbon Reduction Plan Template

Supplier name:

Publication date:

Commitment to achieve

[Supplier name] is committed to

Baseline Emissions For

Baseline emissions are a record of emissions from the past and were produced prior to the reporting period. Baseline emissions are the reference point against which emissions are measured.

[Instructions to Suppliers: Please provide details of your carbon footprint. If you have not previously assessed or reported your carbon footprint, please provide details of your first reporting period as your Baseline.

Baseline Year: 20XX

Additional Details relating to

[Instructions to Suppliers: Please provide details of your carbon footprint.

Current Emissions Reporting

Reporting Year: 20XX

EMISSIONS	TOTAL (tCO ₂ e)
Scope 1	XX
Scope 2	XX
Scope 3 (Included Sources)	XX
Total Emissions	XX

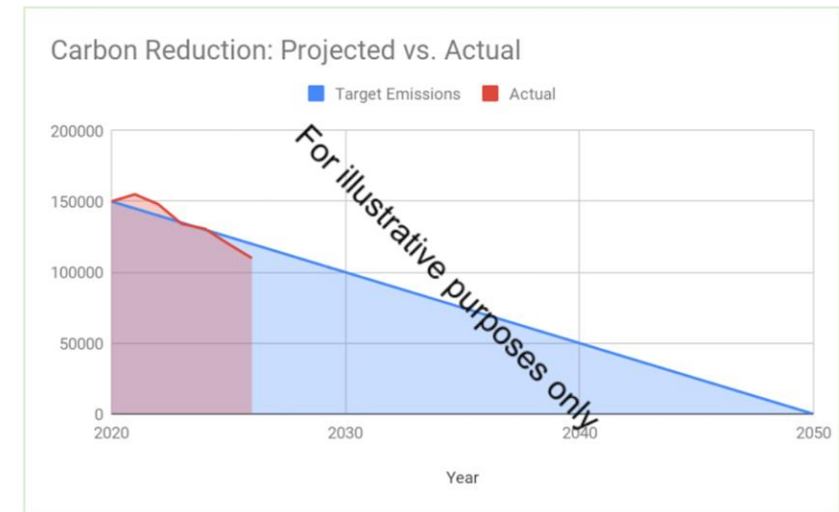
Emissions reduction targets

[Instructions to Suppliers: Please provide details of your carbon footprint.

If existing emissions reduction targets are in place for your organisation, please provide details below.

If you have no previous emissions reduction commitment, or if this is your organisation's first carbon footprint, please provide targets for your organisation]

Progress against these targets can be seen in the graph below:



Carbon Reduction Projects

Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented since the 20XX baseline. The carbon emission reduction achieved by these



Where to start?

Temporal Boundary

Timeframe for which data will be collected.

Confirm
Calendar Year?
Financial Year?
2019? 2021?

Organizational Boundary

Organizational structure that dictates which business operations should be included in the inventory.

Confirm
Operational Control
Financial Control

Emission Source Boundary

Emission sources that are relevant to business operations and should be included in the inventory.

Confirm
Purchased Electricity
Natural Gas
Refrigerants
Other Stationary Combustion
Mobile Combustion

Confirm
Scope 3 Emissions



Where to start?

Relevance

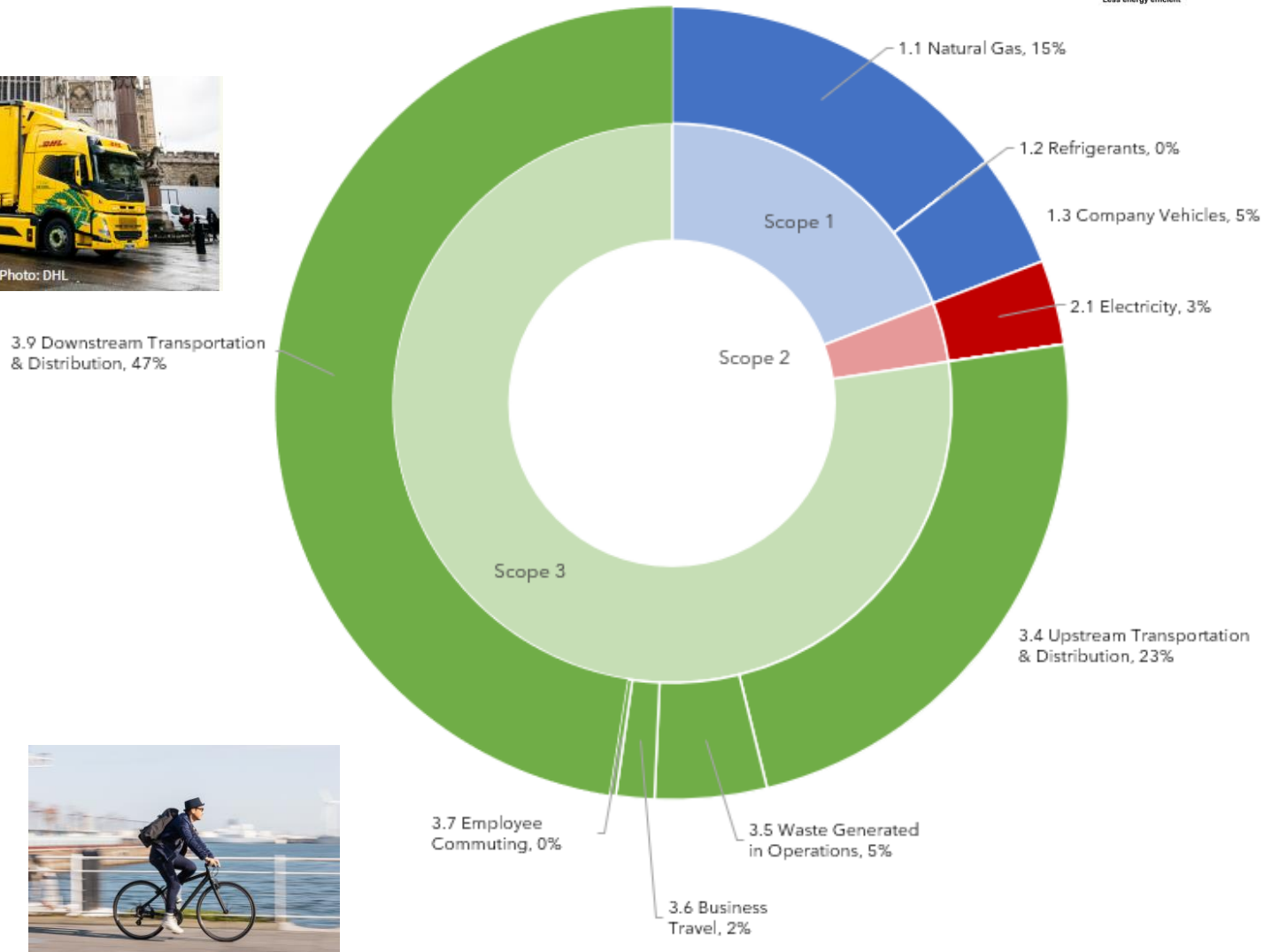
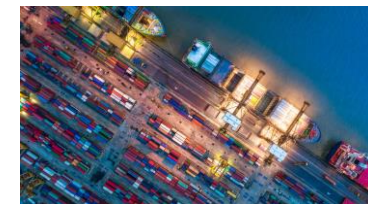
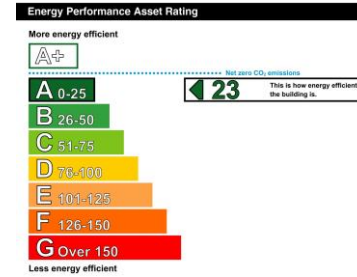
Completeness

Consistency

Transparency

Accuracy

And reducing emissions?







Lucion
Group

**Protecting people
and planet**



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Up Next...



DNV Imatis



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Speaking Now...

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Michael Fjeldstad

Solution Consultant - **DNV**
Imatis AS

Care synchronised

The NHS Estates & Facilities Conference 2023

About

Scandinavian software
company
Founded 1991

E-health solutions
since 2003

Head office in
Norway

A part of DNV since
2021

85 employees
Norway, Denmark,
Australia, UK, Italy,
and Vietnam



Ansatte i Norge

Number of patients in
DNV Imatis: **38 975 000**



40 hospitals



6 750 beds



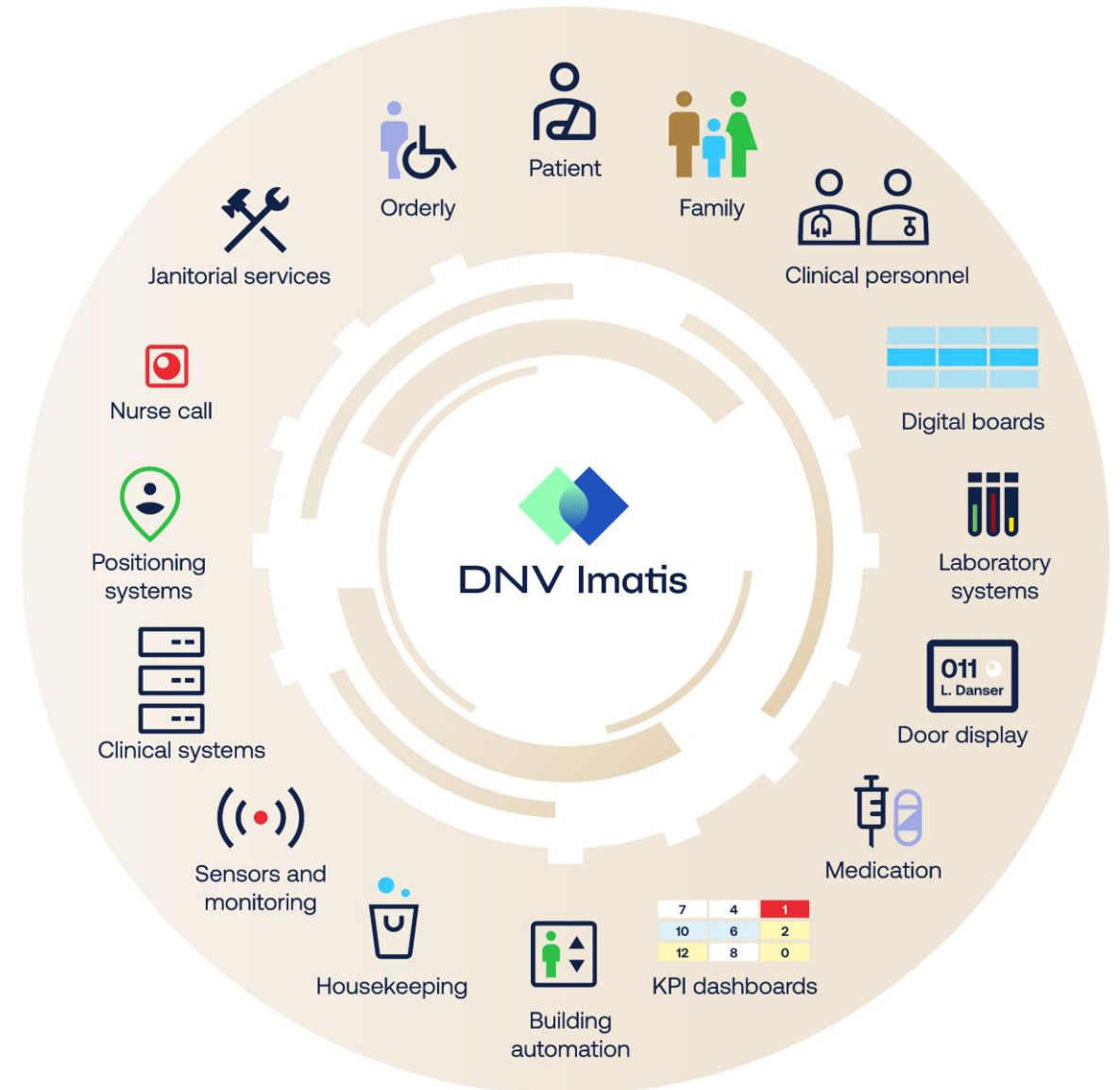
41 900
professional users



8 countries

DNV Imatis Platform

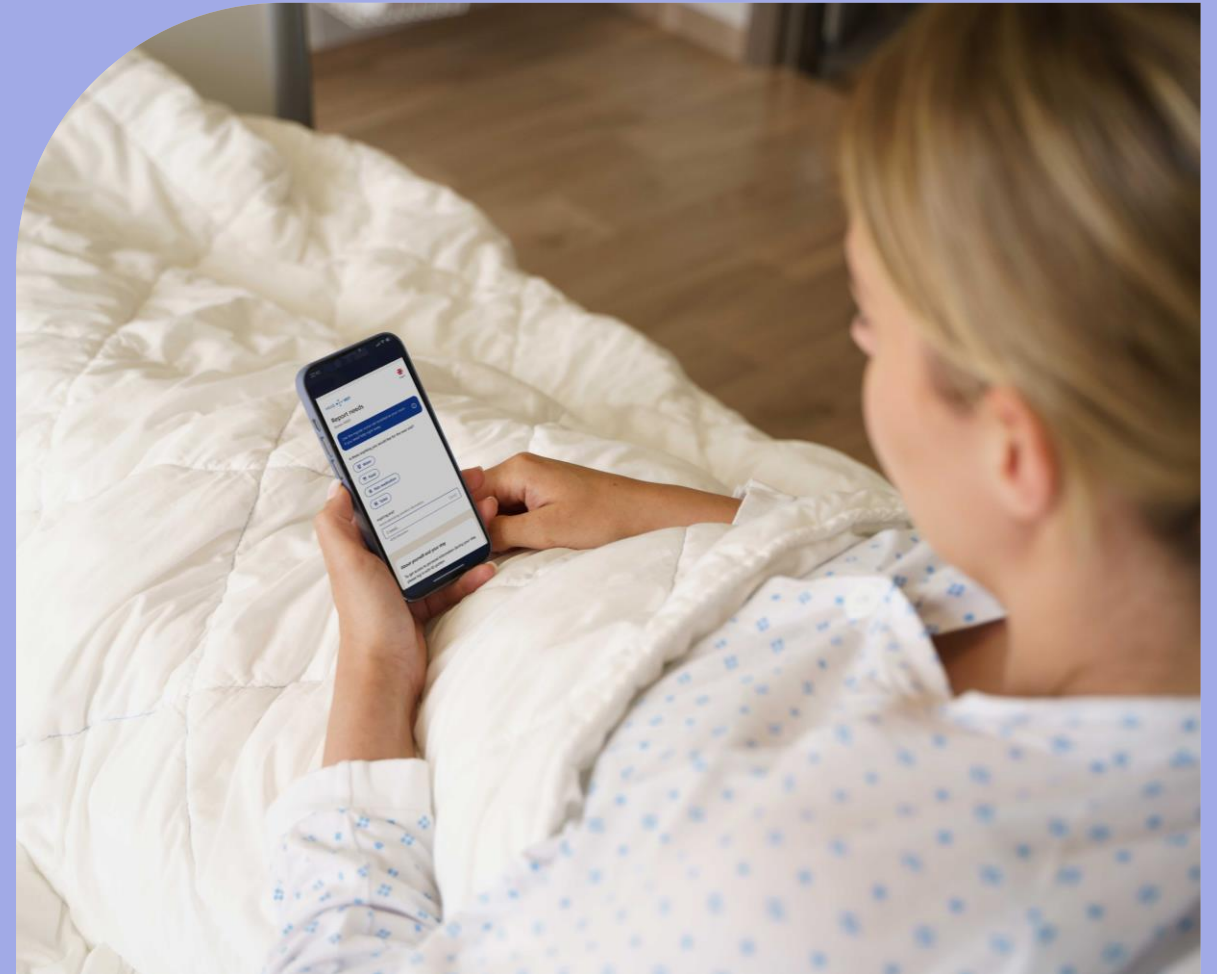
- Voice, video, chat, text messages, images, presence status and contracts all integrated into the same Unified and role-based Nurse Communicator
- Enable silent nurse call for all wards
- Request orderly housekeeping, meal service and technical services in context from same device
- Critical alerts from lab, X-ray, telemetry and medical devices silent to the responsible resource
- More than 250 more SMART apps to add (fall risk, NEWS2, check-lists and much more)



Improving collaboration

between clinical staff and
operations staff

Stories from our customers



Real time data shared simultaneously - with all parties involved

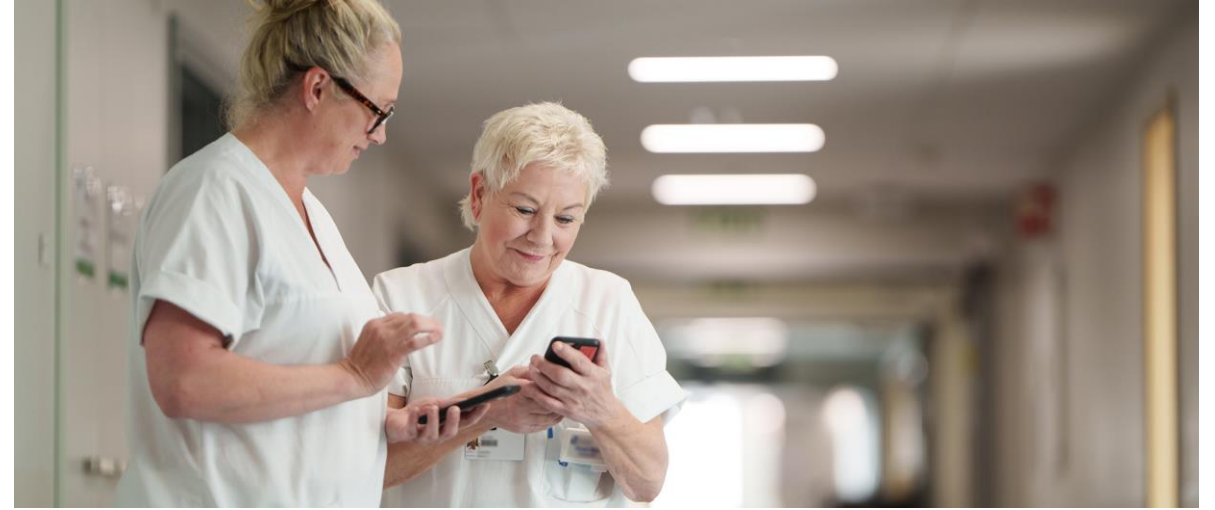
Built to improve everyday working life - for nurses, doctors, porters, cleaning, administration, facilities etc



Maintenance - Task Manager platform



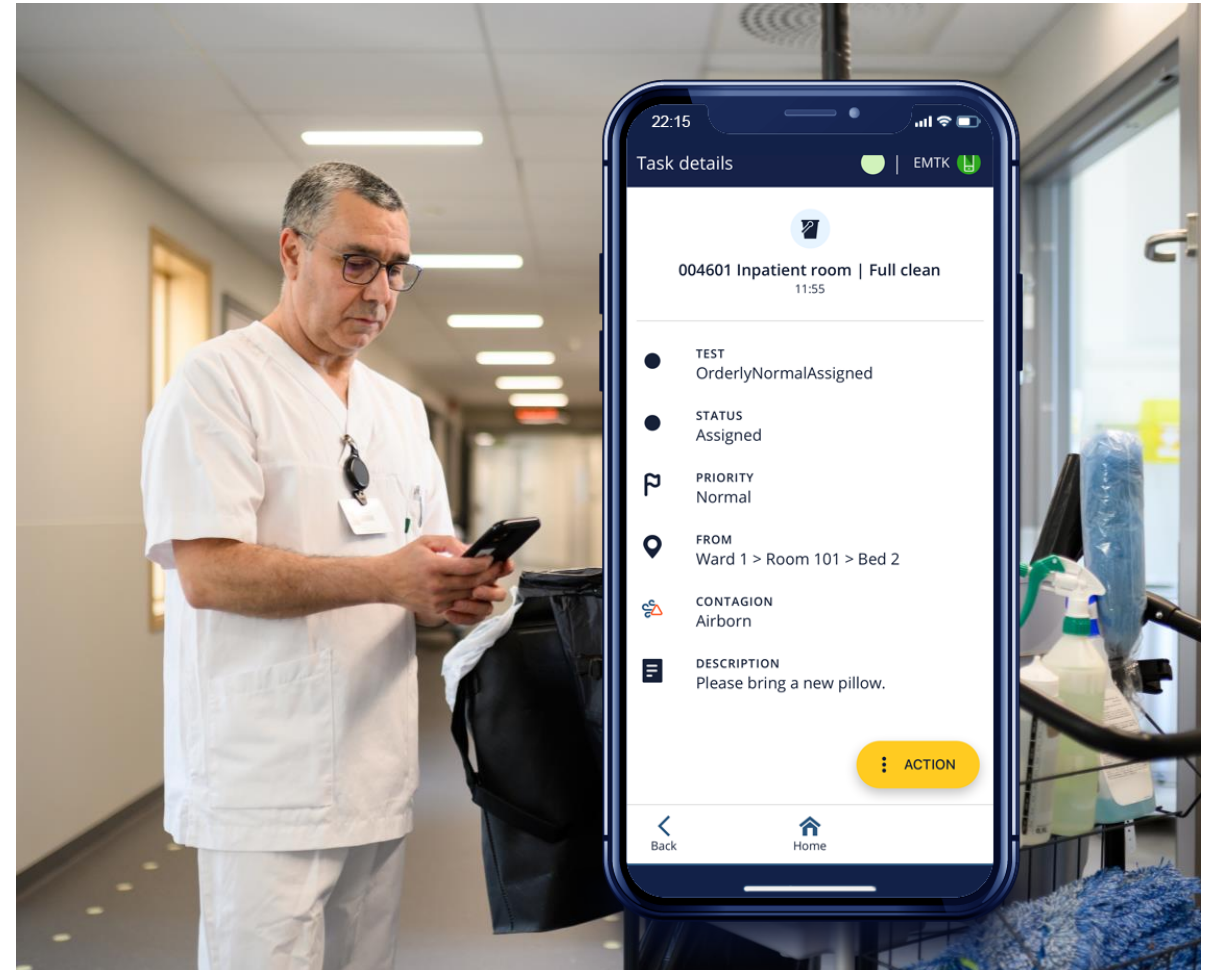
- Repairing / replacing faulty beds, equipment, infotainment systems etc
- Buildings maintenance
 - Replacing light bulbs
 - HVAC system faults
 - Plumbing problems



- Clinicians report via smartphone/PC
- Maintenance worker is notified of what to do based on their responsible role
- DNV Imatis sets rules for who should have which task automatically.

Housekeeping services

- Complete, automated cleaning solution
- Closed loop
- Information on mobile device
 - Allows prioritisation
 - Let you avoid cleaning rooms before discharge
 - Inform you about infection controls, status eg: Is the patient contagious
 - Comply with new infection control tasks (Covid)



Porters / orderly services

- Get complete automated information
- «Turn the trip» with a few steps
- Receive information about infection status and fall risk
- Specify patient transportation requirements
 - Bed, wheelchair etc
- Provide real-time overview for nurses



Food ordering in DNV Imatis

- Digital food cards
 - Separate view for nurse, dietician and kitchen
 - Bedside submission of food requests
 - Wishes, diets and allergies always updated
- ✓ Significantly reduced food waste
- ✓ Proper nutrition improves health

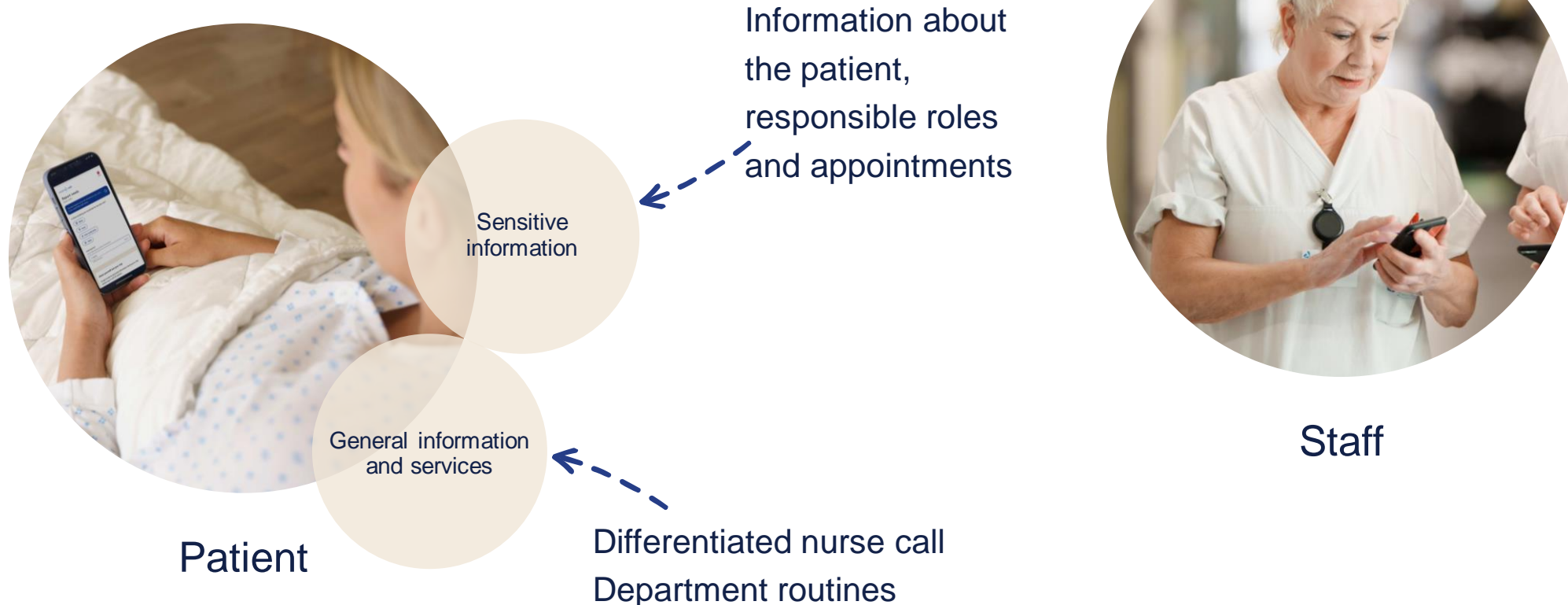


Post	Meny 1	Meny 2	Meny 3	Meny 4	Meny 5	Meny 6	Meny 7	Meny 8 diett	Meny 9 diett	Meny 10 diett	Meny 11 diett	Meny 12 diett	Meny 13 puré	Meny 14 puré	Meny 15 puré	Meny 16 puré	Meny 17 kraft	Meny 18 kraft	Meny 19 kraft	Meny 20 kraft	Dessert 1	Dessert 2	Dessert 3	Dessert 4
Kir/Ort	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Obs / Med 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Med 2	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
Med 3	4	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1

HJERTE- OG LUNGEPOST										KIRURGISK SENGEPOST G			GENERELL MEDISINSK SENGEPOST			NORMALKOST		DIABETESKOST		EKSTRA BESTILLINGER	
POST	TEKNI...	SENG	SENG STATUS	T	TYPE OP...	PASIENT	KJØNN...	S...	RISIKO	KOST	MENY	EKSTRA BESTILLING	SPISE I	MA...	INFO						
KIR G		A303-3 (3)	Opplatt	I	Heldøgn	Gry Amund...	F / 97		Diabet	Diabet	Meny 1 Meny 2	Meny 1 19.02.11:21	Sykerom	✓	Di						
KIR G		B202	Utreise	I	Heldøgn	Jan Anders...	M / 88		F Diabet	Netter	Meny 4	Meny 1 19.02.11:26		✓							
GEA/SLA		A305-1 (3)	Opplatt	I	Heldøgn	Håkon Brevik	M / 60		F Normal	Normal	Meny 3										
GEA/SLA		A305-2 (2)	Renh. besti...	I		James Sa...	M / 87		Diabet	Diabet	Meny 2		Sykerom								
			Renh. besti...						Melkep	Melkep											

Patient Application

Provide a new service for the patient, based upon the existing solution used by the staff



«Waiting on»

Unified overview from several systems

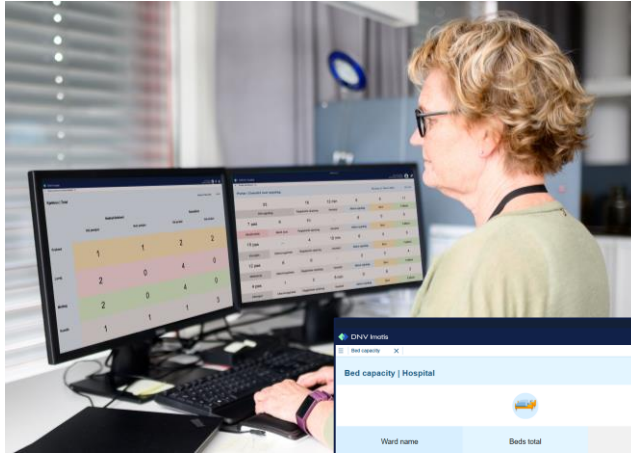
- Wards requests and required support services
- Support services generate "plan for the day" (X-ray, PT, OT, speech therapist, outpatient clinics, etc.)
- Radiology department can advise and give an appointment faster (no need to call)

ALLE PASIENTER	OBS	POSTOP	MED 5	AKUTT	MINIHOS	MOTPOST	ORTHOS	MED 1	KIRHOS	MED 2	MED 3
TEKN POST	POST	TEAM	SENG	SENGEST.	INITIALER	ALDER	SMITTEREGIME	INFO OM P.	SYKEPLEIER		
	MED 2	Tun-4	H255-2	Opplatt	HY	M / 80			⊗ Astrid Ali		
	MED 2	Tun-4	H256-1	Opplatt	JL	M / 59			⊗ Astrid Ali		
	MED 2	Tun-4	H256-2	Utreise i...	HK	M / 80			⊗ Astrid Ali		
	MED 3	Tun.1	H316-1	Opplatt	BA	K / 89					
	MED 3	Tun.1	H316-2	Opplatt	TB	K / 78					
	MED 3	Tun.1	H319-1	Opplatt	TS	M / 72			⊗ Mona Joh		
	MED 3	Tun.1	H319-2	Opplatt	HF	M / 85			⊗ Mona Joh		
	MED 3	Tun.1	H320A	Opplatt	KS	K / 82					

Waiting on

- Fysio 04.09 10:30
- CT 28.08 12:35
- Ergo 04.09 10:15
- Fysio 04.09 09:30
- Ergo 04.09 09:45
- Fysio 04.09 09:45
- Logoped 04.09 12:00

Real time monitoring



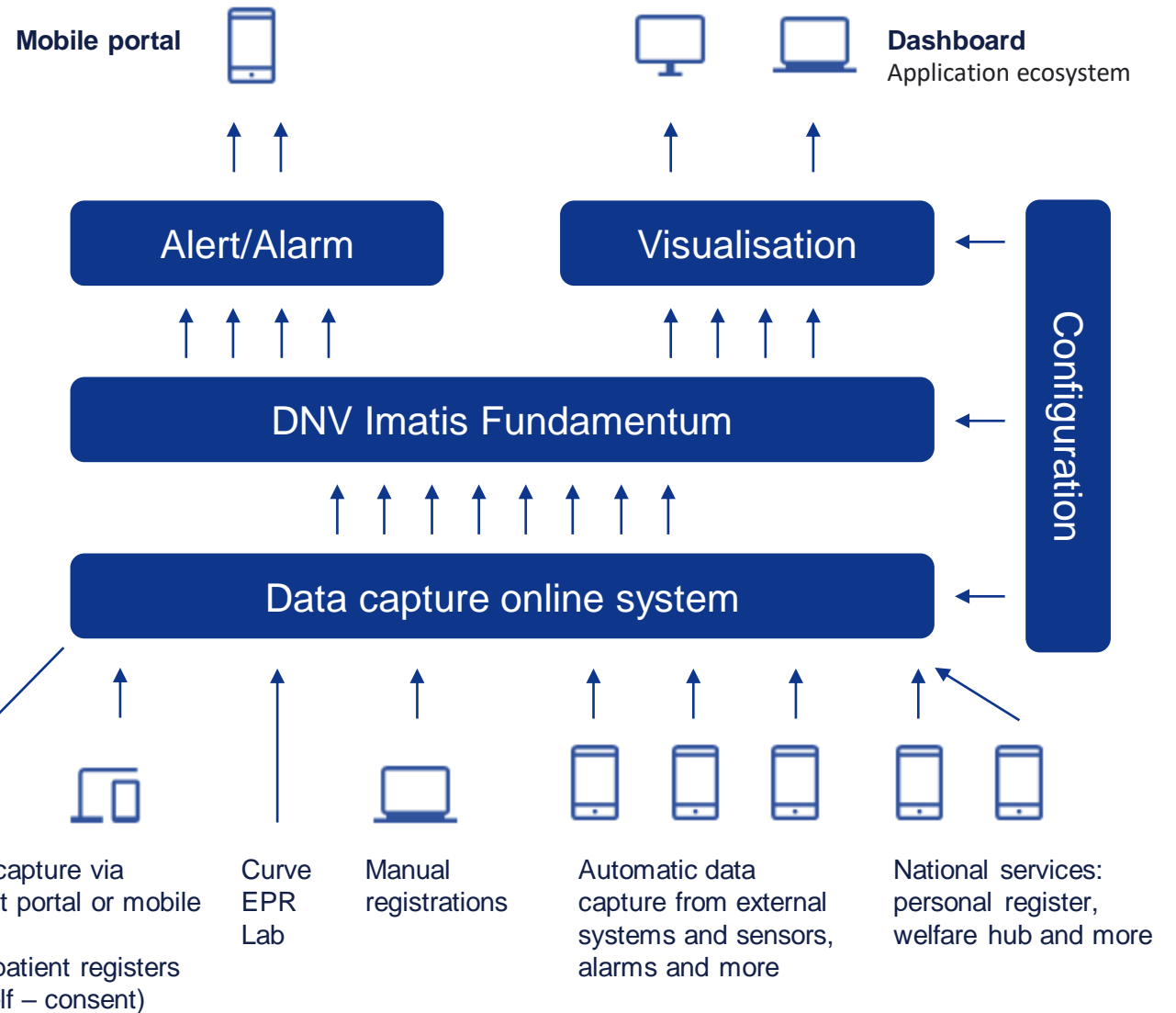
Bed capacity | Hospital

Ward name	Beds total	Patients	Available beds	Arriving patients	Planned discharges
Emergency	12	8	0	0	2
Medical ward
Infection ward	7	4	1	1	0

Emergency | Dashboard

Waiting for triage	Max wait triage	Waiting for doctor	Max wait for doctor	1 - triage not	2 - triage orange	
3	101 days, 2 hrs, 6 min	1	...	0	0	
2	...	54 days, 19 hrs, 57 min	101 days, 13 hrs, 10 min	0	4	
In waiting room	Admitted	Average LOS	Max LOS	Prescription not assigned	Infection	
0	0	0	0	5	1	
Available beds	Discharge ready	Arriving	Reserved beds	Housekeeping	Blocked beds	
0	1	2	1	1	0	
Pulmonology	Cardiology	Geriatrics	Orthopaedics	Neurology	Gynaecology	Surgery

Data warehouse (Power BI)



Overall occupancy overview Haraldsplass

- ✓ Staff planning
- ✓ Patient flow planning
- ✓ Covid overview
- ✓ Used by
 - ✓ Directors
 - ✓ Managers
 - ✓ Coordinators
 - ✓ Nurses

10.11.2022		Occupancy overview				10:16	
Ward	No. pat. (w/o leave)	Patients on leave	Discharge?	Discharge today	Transfer patients	Suspected pandemic	Confirmed pandemic
Akuttmottak Med	7	0	0	0	0	2	0
Akuttmottak Kir/Ort	4	0	0	0	0	1	0
Observasjon (10)	11	0	0	3	0	0	0
Med 1 (5)	5	0	0	0	0	0	0
Med 2 (31)	32	0	2	0	0	0	2
Med 3 (29)	31	0	11	0	0	0	0
Med 5 (24)	24	0	5	0	0	0	0
Intensiv (6)	3	0	0	0	0	0	1
Preoperativ (KODA)	1	0	0	0	0	0	0
Postoperativ Kir/Ort	6	0	0	0	0	0	0
Kirurgisk (20/15)	14	0	0	1	0	0	0
Ortopedisk (17/10)	17	0	3	2	0	0	0
Totalt	153	0	21	6	0	3	3

Benefits



Purpose of DNV Imatis at Østfold Hospital

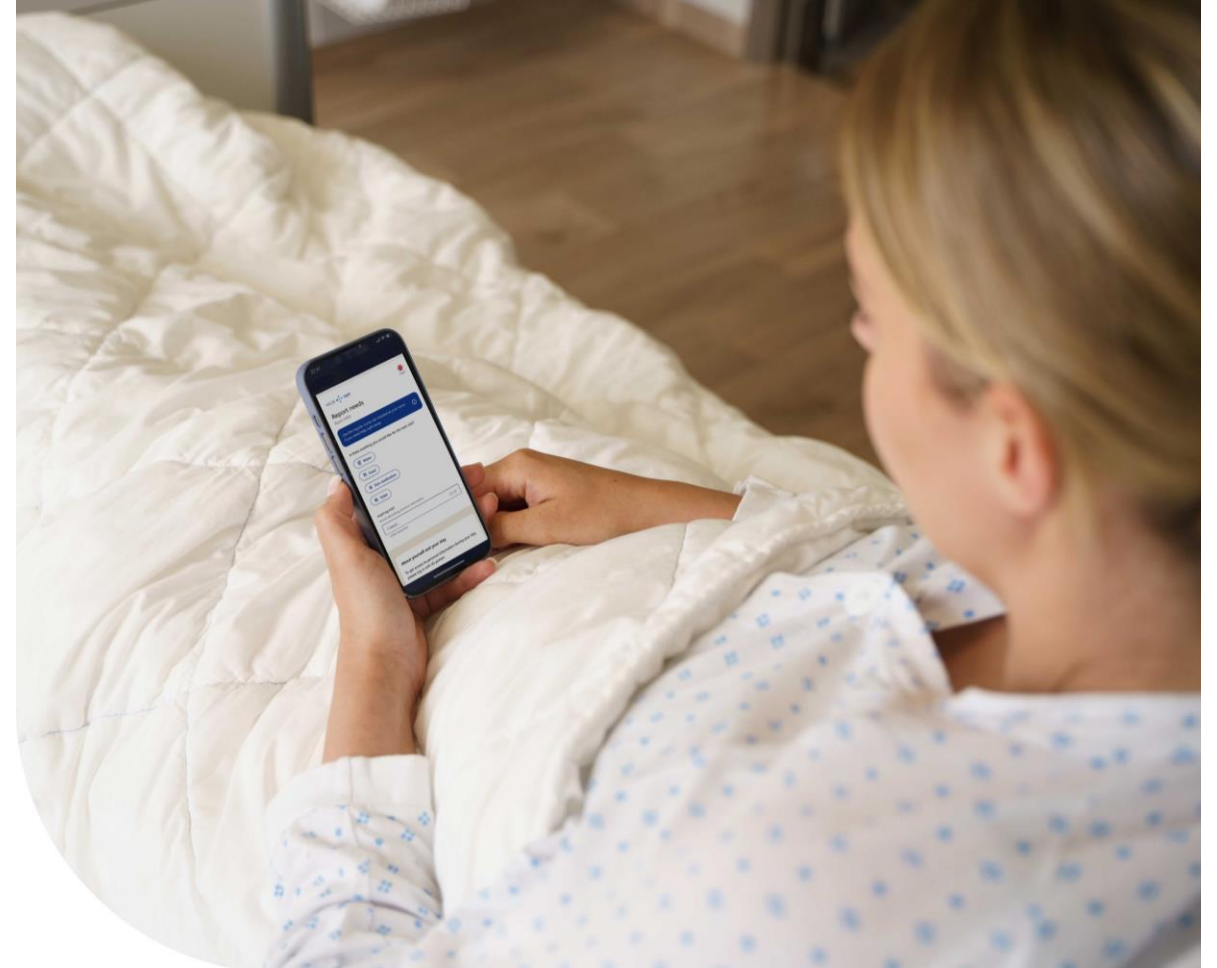
«DNV Imatis is our main tool for supporting important work processes, patient flow, coordination, logistics and interaction internally in the hospital»

Executive Director of Development
~ Helge Stene Johansen



Benefits

- Clear communication between patient and healthcare personnel
 - Easier to inform the patient 'bedside' of the plan
- Patients see their appointments on their own mobile phones
- Extend the lifetime of the "Standard" Nurse call systems
- Contribute to new hospitals being able to build private rooms
- Streamlined processes
- Productivity gains from fewer nonessential trips



Contact



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Thank you.



Speaking Now...

The NHS **2023**
Estates &
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Harriet Ddungu

Deputy Lead Nurse – Infection
Prevention and Control - **East
London NHS Foundation Trust**



Dr Angharad Ruttley

Medical Director - **East London
Foundation Trust**

Air Cleaning in a Psychiatric Inpatient Setting - Another Layer of Protection Against Covid-19/Airborne Viruses?

NHS Estates and Facilities Conference
6th July 2023

Harriet Ddungu, ELFT Trust-wide Deputy
Lead Nurse IPC h.ddungu@nhs.net

Dr Angharad Ruttley, Medical Director,
ELFT Luton and Bedfordshire
@angharadruttley a.ruttley@nhs.net



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- The challenge of managing infectious diseases and safety in psychiatric inpatient settings
- Transmission of COVID-19 in psychiatric inpatient settings
- Infection control and outbreaks
- Air Cleaning using HEPA filtration units - Our story thus far and special considerations
- Discussion and next steps



➤ **Patients - Reduced life expectancy/chronic ill-health**

- Dementia, obesity, diabetes, cardiovascular and chronic respiratory disease
- Black/Ethnic Minority/Migrant populations over-represented Cf. to gen pop

➤ **Patients**

- Ligature risks
- Falls risks
- Detained patients
- Wandering

➤ **Staffing**

- Majority of inpatient staff Black/Asian/Minority – increased risk / vulnerabilities
- 1:1 nursing care – prolonged close contact for staff/service user



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➤ **Patient Illness may interfere with ability to comprehend, remember and comply with protocols**

- Delusions/hallucinations
- Aggression
- Agitation
- Disorientation



Difficulty complying with:

- Maintaining distance/isolating
- Mask wearing
- Physical health examinations
- Swab testing
- Communication difficulties

➤ **Staff factors**

- Mask/infection control protocol fatigue
- Staff not infection control experts

➤ **Environmental factors**

- Wards are designed for social interaction, people move around!
- ‘Closed windows’ phenomenon/risk/pollution
- Poor air quality/ventilation systems or non opening windows



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Infection Control on Psychiatric Inpatient Wards during COVID-19

- Rapidly evolving and changing guidance for staff to follow
- New admissions processes; use of testing and admissions co-horting
- Friends/family visiting and patient leave restrictions
- Outbreak management
- Level of staff expertise/infection control staff increasing
- Infection control in 'acute hospital' settings vs psychiatric wards; wards designed for group therapeutic activities and social interaction



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OUTBREAKS STILL OCCURRING

Significant Impacts of Outbreaks

➤ Staffing and risk issues

- Sick leave requiring cover and impact of sickness on individuals and their families
- Disruption to staff rotas and roles, use of agency staff
- Long-term burden on substantive staff managing gaps
- Severe illness/long covid

➤ Cost issues

- Agency usage to cover staff gaps
- Enhanced cleaning
- Pathology – point of care testing

➤ Flow and capacity issues

- Access to inpatient beds related to bed or ward closure
- Disruption in bed management
- Pressure across the health system when admissions reduced/delayed

➤ Service user and carer issues

- Impacts of self-isolation when mentally unwell - interaction with others is important for recovery and treatment
- Inability of friends/relatives to visit on the ward
- Risk of severe illness/long covid/CVA



What Else Could be Done to Mitigate Risks?

➤ What we knew:

- 1) Outbreaks are still occurring
- 2) Likely transmission – patient to patient and patient to staff or vice versa
- 3) Lack of interest in mitigations other than standard PHE guidance – e.g. good ventilation awareness is low and difficult to implement
- 4) Lack of interest in interventions that were perceived as too difficult, costly and/or unproven
- 5) Studies focusing on acute hospital settings

➤ What we did:

- Interested people came together:
 - Estates: Director of Estates
 - Clinicians: Medical Director, Infection Control team and Research nurse
- Air cleaning using HEPA filtration as an option for improving and supplementing ventilation on a test ward
- Began working with an existing research study team AAirDS/Air Purity at University of Cambridge



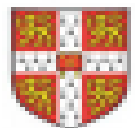
Addenbrookes Air Disinfection Study (AAirDS)

Study details:

- Staggered 12-month before and after controlled interventional study of HEPA filters on two medicine for older people wards at Addenbrookes Hospital, Cambridge.
- Funded by the UK Health Security Agency (UKHSA).
- Study has epidemiological (patient data) and microbiological (microbial air samples) elements.
- Study is wide ranging - investigating both bacterial (*S. aureus*, *Acinetobacter*, etc.) and viral (SARS-CoV-2, etc.) pathogens and infections.
- First study of its kind in a clinical medicine for older people context.

Research questions:

- Did the intervention of the HEPA filters reduce the incidence of viral and bacterial nosocomial infections on the wards?
- Is the aerial route playing a role in the nosocomial transmission of infection in hospital wards?



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NHS

Cambridge
University Hospitals
NHS Foundation Trust

➤ **We Contribute**

- Qualitative data - acceptability/tolerability of HEPA units, design/installation/running for specific settings
- Quantitative data

➤ **We Benefit**

- Minimal costs – e.g. units are given for free with Estates covering labour, fixings and consumables
- Expertise on HEPA systems and air cleaning research
- May reduce COVID-19 transmission and COVID-19 infectious outbreaks therefore offering more protection to vulnerable patients



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Ask about the
#ELFTPromise



Which site would work to test this work?

Fountain's Court, Bedfordshire

- 26-bedded acute assessment unit for older people with dementia and functional mental illness (e.g. depression, psychosis)
- 3 wings of single bedrooms with en-suite bathrooms and central reception
- Therapies, dining and social spaces, staff offices and eating/rest areas
- Staff are RMN trained nurses, psychologists, mental health OTs, Psychiatry trainees and Consultants
- High staff compliance with mask wearing, handwashing and other IPC measures / protocols
- High levels of co-morbidity/patients at risk of COVID-19 complications
- Poor estate in terms of air quality/ventilation



COVID-19 on Fountains Court: From October 2020 - May 2023

- **10** COVID-19 outbreaks
- **3** separate instances of individual Covid-19 cases (Oct 2022, Nov 2022 and Nov 2022)
- **94** people affected in total (72 patients, 17 staff, 2 contractors, 3 single incident patients)
- Prior to August 2022
 - 1 death within 7 days of a positive swab
 - 2 transfers to acute hospital
- Levels of harm have been reported from August 2022
 - No cases of medium or high levels of harm (ITU/Death)
- Only **2** of the 94 cases were classified as community onset (<2 days after admission). All other cases were classified as **hospital onset**.
- No data on longer term morbidity of positive cases is available



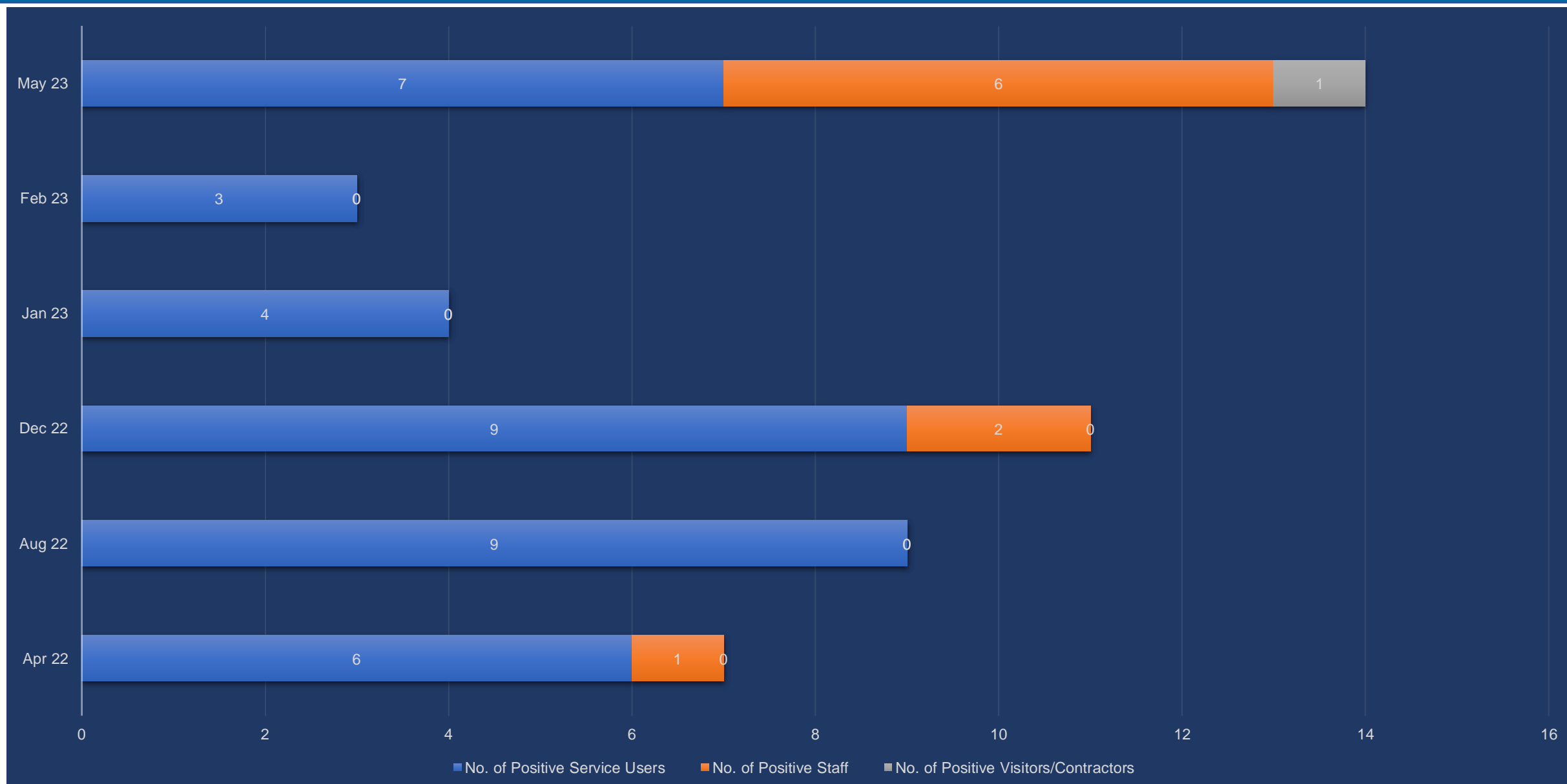
- Since October 2020, there have been 10 COVID-19 outbreaks. 6 of these outbreaks have been in the last year and last between 8-24 days.
- Since 2022, FFP3 masks have been available for staff caring for COVID-19 positive patients but are voluntary.
- ELFT have a COVID-19 Vaccination programme for eligible patients on all inpatient wards and a similar programme for community patients on the GP SMI register.
- Visiting and leave restrictions vary locally and are based on national guidance.



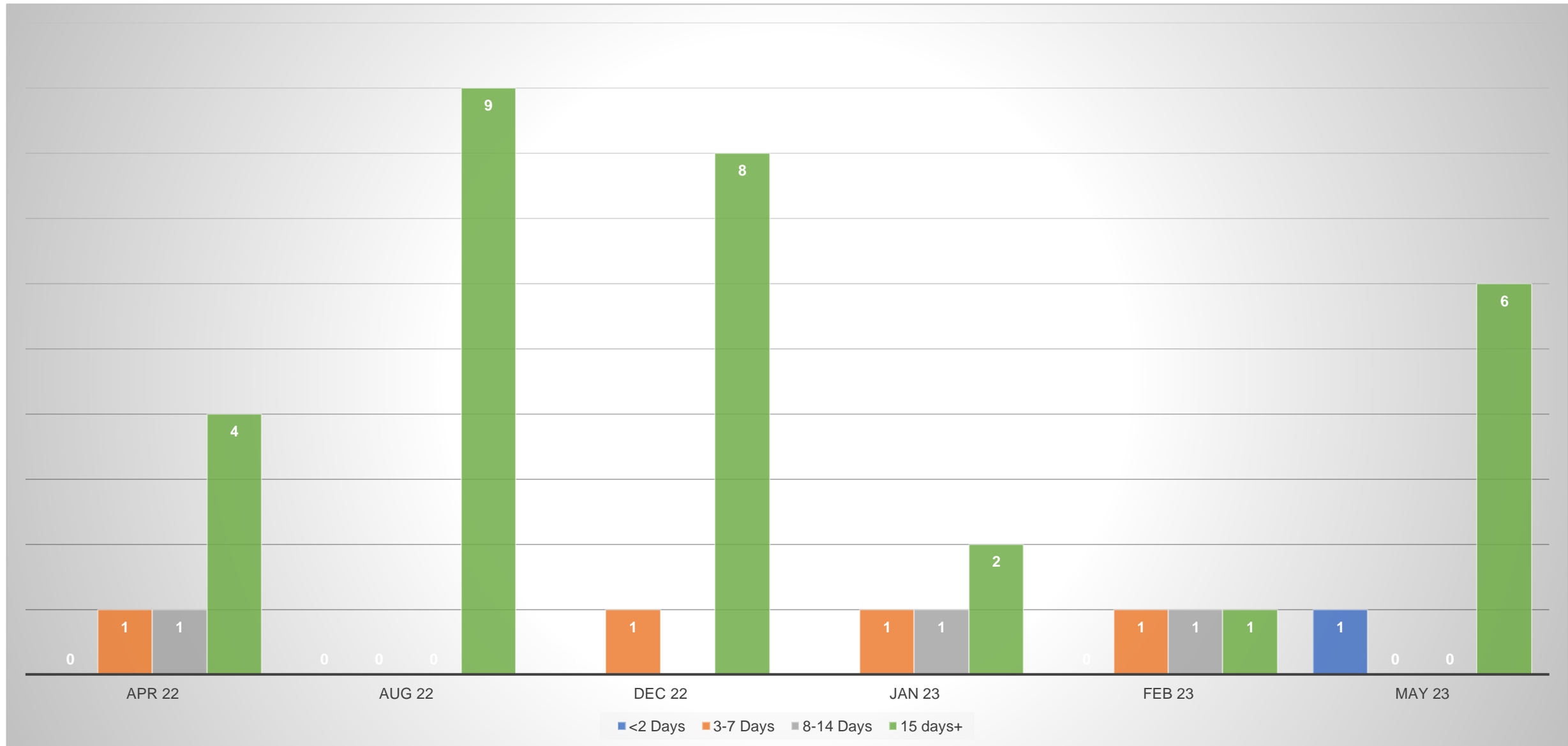
Breakdown of Positive Cases from Fountains Court Covid-19 Outbreaks (1st April 2022 - 31st May 2023)



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Distribution of HOCIs for Covid-19 Outbreaks (1st April 2022 - 31st May 2023)



Working with the AAirDS Study Team

- Site visits with HEPA filtration units and AirPurity
- Staff and service user buy in - co-production and feedback
- Redesign of HEPA Units
- Governance within ELFT - Oversight
 - ❑ Ligature Reduction / Ligature Risk Reduction Group
 - ❑ Infection Control and Prevention Committee
 - ❑ Ventilation Group
- Research Governance
 - ❑ Ethics approval not required - not contributing to the patient data arm of the study
 - ❑ Qualitative information being generated is not a defined outcome of the study - ELFT can collect this information using existing qualitative surveys from AAirDS, service evaluation, case study and quality improvement methodologies.



Site Visits

➤ Large Mobile Unit brought to site

Challenges identified by clinical team:

- Multiple ligature points
- Could be pushed over / damaged
- Aesthetically unacceptable
- Concerns about noise
- Controls accessible
- Plug-in wire - trip and ligature hazard
- Easily turned-off
- Units large and multiple units required



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Re-design of Unit

- Encased Fixed Unit
 - Finer mesh removes ligature risk
 - Sloping top removes ligature angles
 - Removal of other ligature points
 - Screen inaccessible to break/tamper
 - Removal of wheels, screw in unit
 - Turn-off switch less accessible



**UNITS ARE NOW BEING
PAINTED!**



Finished Units



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➤ Challenges

- Staff used to team/service user led 'bottom-up' Quality Improvement work
- We picked site and had project in place - different approach: staff apprehensive - being 'done to'
- Identifying the right staff and service users/carers to get involved
- Which staff? - ward managers key
- Using existing structures to raise awareness/educate - staff away days
- Dementia friendly setting; redecoration/improvements incorporated units
- Struggled to get our Trust People Participation team interested; changed focus to engaging with current inpatients and carers - patient forum
- Key involvement:
 - ❑ **Educational video - service user and staff focus group to help with design**
 - ❑ **Redesign of Units to meet challenges of psychiatric setting - clinical expertise**



- Long journey from conception to finish; not there yet.
- Units to be installed in July 2023 and will be in situ for 1 year.
- Case study of re-design and installation process / monitoring of any incidents post installation via incident reporting.
- Outbreak monitoring - continuation of LFD testing on admission to enable outbreak data to continue to be collected in the same way.
- Qualitative data - educational video with service user and staff feedback to improve acceptability of units.
- Potentially, further roll-out across the Trust?



NHS Guidance on HEPA filters

Date published: 9 May, 2023
Date last updated: 9 May, 2023

[Download as a PDF](#)

Estates

Application of HEPA filter devices for air cleaning in healthcare spaces: guidance and standards

<https://www.england.nhs.uk/long-read/application-of-hepa-filter-devices-for-air-cleaning-in-healthcare-spaces-guidance-and-standards/#5-engineering-design-specification-and-performance-validation>

With Special Thanks To...

Darren Sloof - AirPurity

Dr Matthew Butler - AAirDS

ELFT Team, and our Fountains Court patients:

- Suzy Enoh Arthur, Research Nurse
- David Stevens and Bevan Speariett, Estates
- Caroline Hadland and Li Yuping and Team, Fountains Court Ward Managers
- Charles Bvunzawabaya and Shahida Ahmed, Modern Matrons for Inpatient Services
- Rana Begum and Harriet Ddungu – Trust-wide Lead Infection Control and Prevention Nurses
- Dr. Satta – Infection Prevention and Control Doctor



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Barnett P, Mackay E, Matthews H, Gate R, Greenwood H, Ariyo K, Bhui K, Halvorsrud K, Pilling S, Smith S. Ethnic variations in compulsory detention under the Mental Health Act: a systematic review and meta-analysis of international data. *Lancet Psychiatry*. 2019 Apr;6(4):305-317. doi: 10.1016/S2215-0366(19)30027-6. Epub 2019 Mar 4. PMID: 30846354; PMCID: PMC6494977.

Infection Prevention and Control Policy Manual, v3 ELFT August 2022, ELFT.nhs.uk

COVID-19 – Infection Prevention and Control Policy, ELFT February 2022, ELFT.nhs.uk

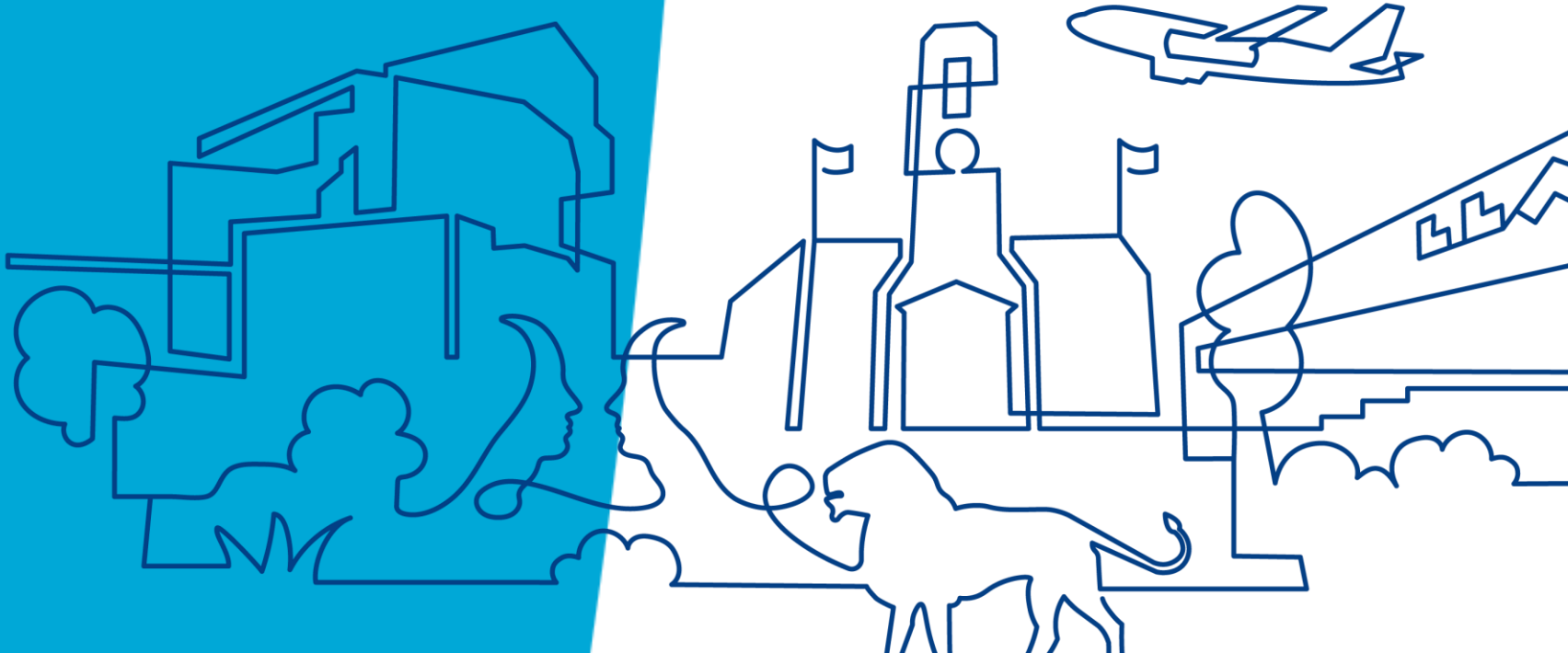
<https://www.england.nhs.uk/long-read/application-of-hepa-filter-devices-for-air-cleaning-in-healthcare-spaces-guidance-and-standards/#:~:text=Local%20HEPA%20filter%2Dbased%20air,the%20risk%20of%20airborne%20transmission.>

Butler, MB and Sloof, D and Peters, C and Conway Morris, A and Gouliouris, T and Thaxter, R and Keevil, VL and Beggs, CB (2023) Impact of supplementary air filtration on aerosols and particulate matter in a UK hospital ward: a case study. *Journal of Hospital Infection*, 135. pp. 81-89. ISSN 0195-6701 DOI: <https://doi.org/10.1016/j.jhin.2023.02.006>





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2023



Up Next...



GroupNexus



Speaking Now...

The NHS **2023**
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Stuart McGeary

Business Development Manager
- **Group Nexus**



GroupNexus®

NHS Estates and Facilities Conference

6th July 2023

Stuart McGeary, Business Development Manager

GroupNexus began
with an encounter at
QEI hospital,
Welwyn Garden City
in 1991



Ian Langdon, Founder, in 1991

We've been working with the NHS for over 30 years
and seen car parking services evolve

Apart from upgrading systems, there's been little change within NHS parking over this period

However, the acceleration of digitisation now means that things are, and can evolve much quicker

Traditionally, car parking has been an outsourced service that sits in isolation to the broader healthcare service. **Why is that?**

Procurement:

Commoditised

- Services are procured like a product, and fixed for the term

Prescriptive specifications without input of industry experts

- Difficult to present alternative solutions or innovate at bid stage

Portal based procurement

- No opportunity to enter into dialogue to fully understand requirements and make innovative suggestions

Cost focused (encouraging enforcement to fund schemes)

- Most enforcement activity comes from genuine visitors or staff who are unable to find space

Locked in contracts with no ability to innovate during the term

- Only at renewal stage are services or systems reviewed

Changing Landscape:

Lack of Space

- Not enough space to meet demand, especially staff car parking

Post Covid Driver Habits

- Increase in vehicle use vs. decrease in time spent at work - net balance is an increase in vehicles
 - One Trust claims that 40% of staff were using cars to travel to work pre Covid, now 70%

Advancements in Vehicle Technology

- What does a vehicle look like and what will it be capable of in 5 years

EV Ownership and Usage

- How many NHS staff can own an EV today? Limited to people with driveways and charge points

Net Zero Targets

- Requirements to have a greater understanding about the emissions and Net Zero Solutions across all aspects of the Trust

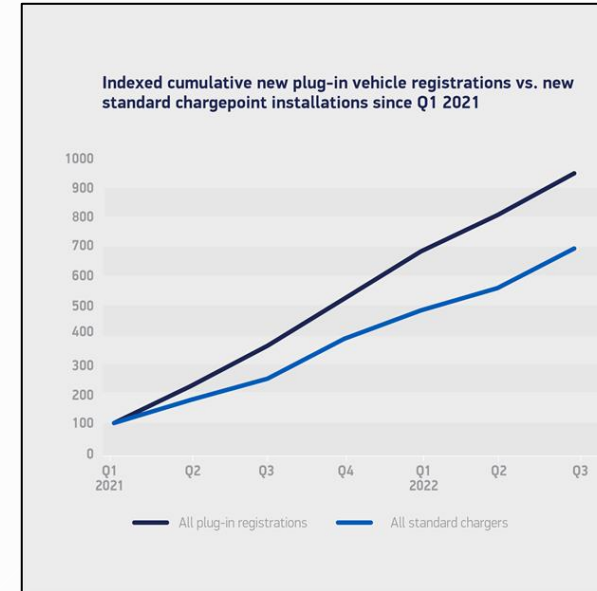
EV Strategy

EV ownership is increasing - but how much? Do you really need 15 chargers yet?

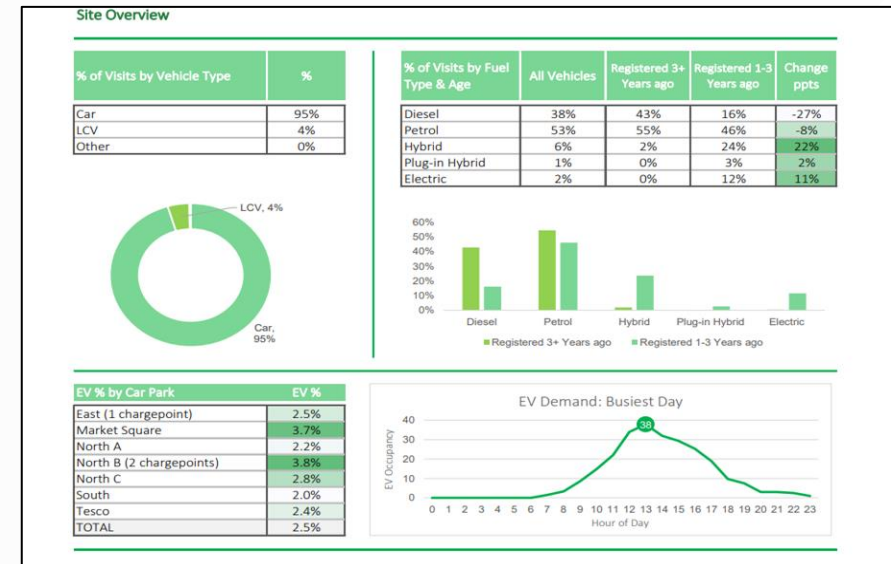
- We analyse parking data to understand what's needed at each site:
 - By age of vehicle: looking at cars purchased within the last 3 years, we found that **7.6% of these cars were electric** – a **2.4 ppt year on year increase**
 - Analyse peak EV visitor times to ensure sufficient charging provision
 - Review dwell times of EVs vs ICE vehicles
 - Monitor the use of EV bays against volume of charge
 - Continue to track EV data for on-going optimisations
 - What type of chargers are best suited?

- Our vision:
 - EV charging provision to be fully integrated with parking payment system
 - Digital signage to direct EV cars to available EV bays
 - SMS to be sent once charging is complete and incentivise drivers to vacate the space
 - Incentivise EV drivers with lower parking tariffs

UK data: EVs vs Charge points:



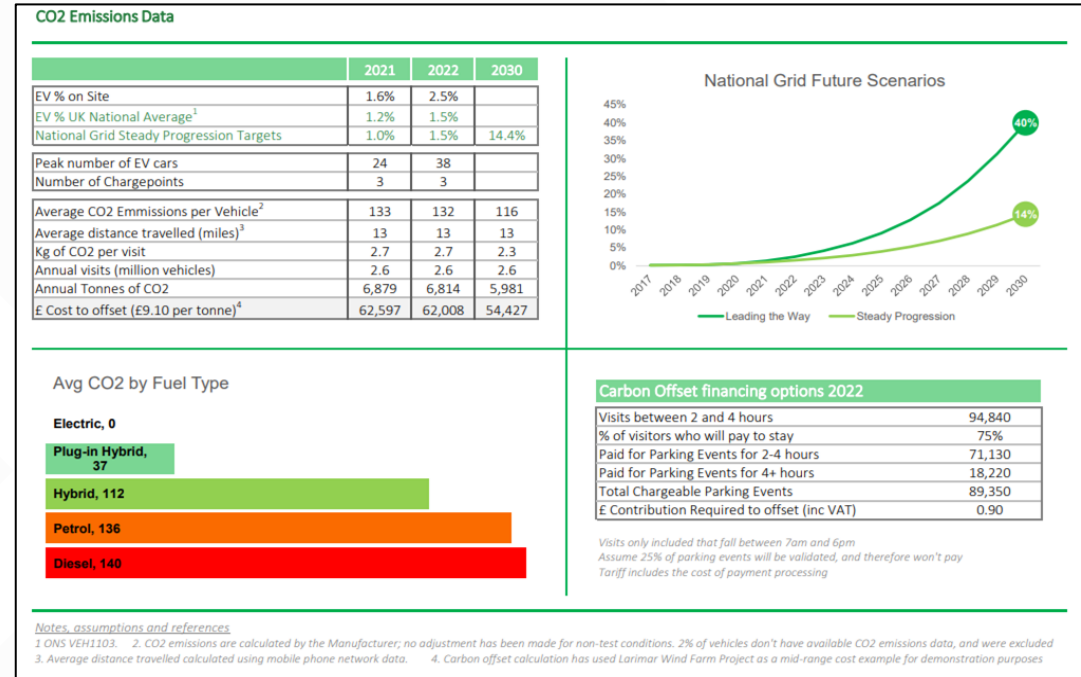
An example of our comprehensive EV reports:



Measurement of CO2 Emissions:

How do you measure your emissions?
Do you include travel and parking?

- Requirements to have a greater understanding about the emissions and Net Zero Solutions across all aspects of the Trust
- Parking data allows you to monitor the emissions of vehicles on site
 - And factor in travel time
- Our Vision:
 - CO2 emissions from vehicles to be offset through [voluntary] parking tariffs to achieve a Net Zero car park
 - Incentivise low emission vehicles



An example of our comprehensive CO2 report, and offsetting recommendations:

Regulatory Changes:

Concessions (free parking for those with the greatest need)

The following groups no longer need to pay for hospital parking:

- Blue Badge Holders
- Frequent outpatient attenders
- Parents of sick children staying overnight
- Staff working night shifts

Parking Act

There will be a future requirement to:

- Have systems in place that can monitor appeals and other processes
- Likely that the PCN value will be reduced
- Enforcement funded schemes will become unviable

Future regulations

- Regulations will continue to evolve therefore it's essential to have a flexible system that can adapt with the changing regs

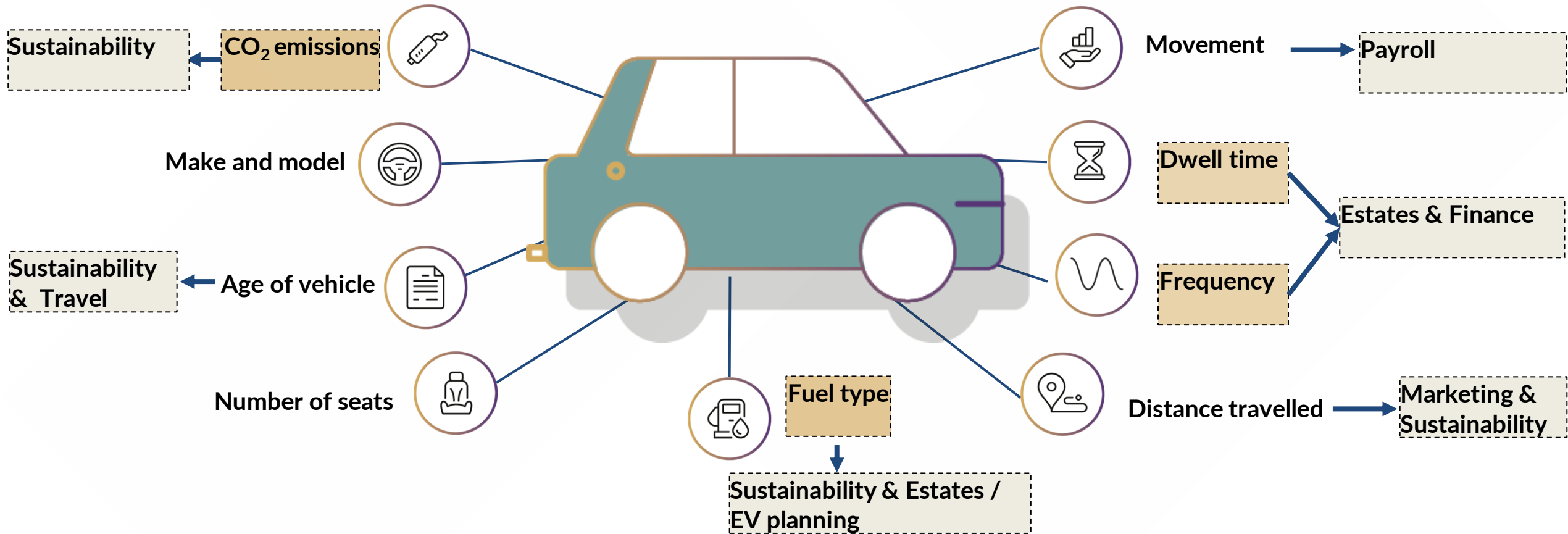
The parking landscape is changing and there are new approaches that can help

It all begins with data insights and a deeper understanding

- Current disjointed parking systems that do not speak with each other
- Reports from multiple sources that only deliver high level overviews
- ANPR can provide much more than enforcement tools
- Having an ecosystem that can analyse all parking activity is key
- Integration with other departments and systems:

Payroll	IT	Estates	Finance	Appointments
Sustainability	Nursing	Travel	PALS	Communications

Parking data can provide the insights needed to respond to these challenges



Therefore, we've built a system that is future focused and can evolve to address the rapidly changing climate

We've created a complete parking ecosystem:

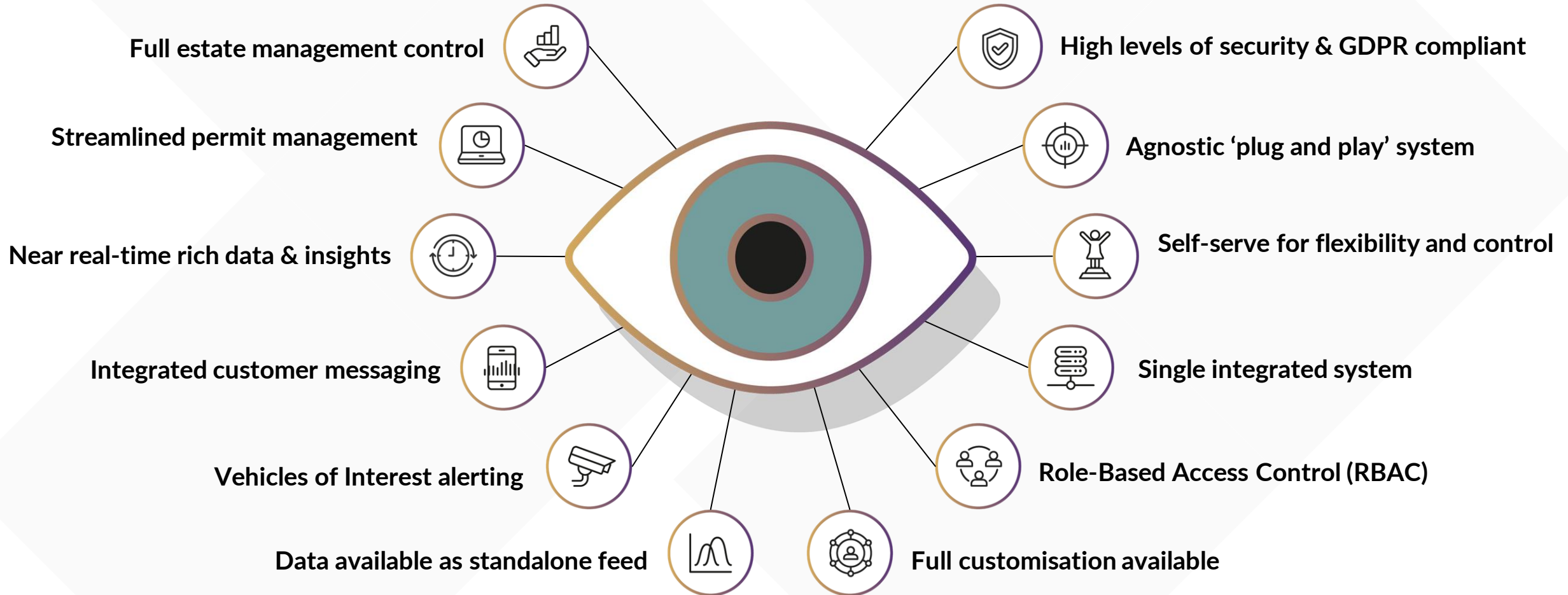
- Deep parking data
 - Dwell time, Frequency, Fuel type, CO2 emissions
- Payment systems
 - Online, app, linked systems, review revenue, facilitate PAYG
- Permit system (NexusPermit)
 - From paper permit on vehicles to completely digital, virtual solution
- Plus lots more...
 - Enforcement
 - Estate Management

The GroupNexus Ecosystem is continually evolving as is the parking landscape....

The NexusPlatform

Features:

Supporting details:



Permit System

Permit Management

We offer a comprehensive parking permit system for permit allocation management via an online application and management portal.

Users are able to create, view and update permits at a group level, with the ability to define the groups. Permit details, duration, timings, applicable dates and assigned car parks can all be configured and edited.

The scope of this feature also extends to the management of permit holders' permissions alongside access across clients, sites & even car parks.

Compatible with any existing ANPR or other parking management system, NexusPermit simplifies permit allocation, management and payments.

Bespoke NHS features

As well as significant administrative cost savings, NexusPermit has been designed with the features and functionality needed in order to enable our NHS clients to meet the manifesto commitments for the provision of free parking to designated groups.



Pop over to our stand for a demo of the NexusPlatform

Thank you



GroupNexus[®]



Slido

Please scan the QR Code on the screen. This will take you through to Slido, where you can interact with us.



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Q&A Panel



The NHS **2023**
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Lunch



Chair Afternoon Address

The NHS
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2023



Andrew Gate

Regional Delivery Director: North
East & Yorkshire Region - **NHS**
England Estates and Facilities Team



The NHS
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Up Next...



B R E A T H E



Speaking Now...

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Stuart Bowman

Business Growth Director -
Breathe Energy



Breathe Insight Session

Lessons and Tips for Successful Net Zero Delivery

Stuart Bowman, Business Growth Director



Strictly private and confidential



B R E A T H E

Breathe overview

Energy & Carbon Reduction: Develop, Deliver, Operate.



Founded in 2010, acquired by Imtech in 2019 (an EDF and Dalkia company)



Energy & carbon reduction agreements across 20 + sites, forging long term partnerships with clients



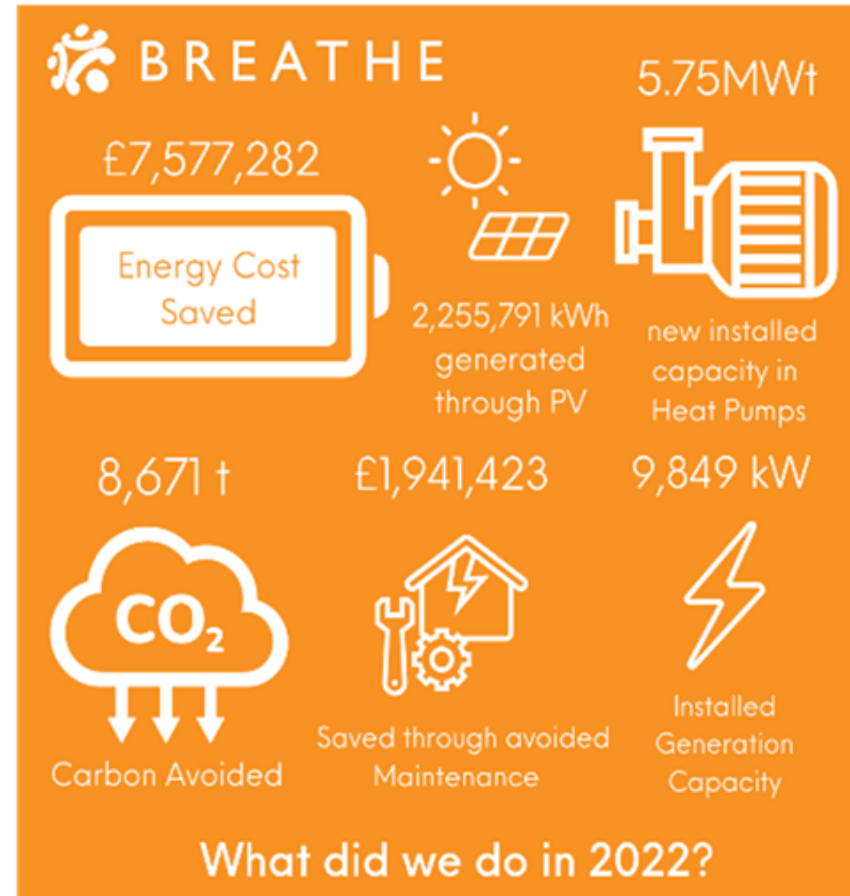
Extensive experience in Net Zero on existing live & operational public sector estate



£300m projects value delivering over £30m energy and 161kt carbon savings



Funding expertise – e.g. supported our customers in securing and delivering c.£200m via PSDS



Net Zero Example – North Tyneside General Hospital

Project Overview

- Trust secured £22m of PSDS funding with support from Breathe.
- Whole building approach deployed
- Design, Build, Operate & Maintain (DBOM)
- Innovative low carbon supply of heating, hot water and cooling via new energy centre
- Deliver sustainable carbon reduction c.3,371 tCO₂e savings p.a. Scope 1 & 2
- Opex cost savings c. £1.3m p.a. based on current energy rates
- Address critical backlog risk through the replacement of aging steam & HV electrical infrastructure equates to c. £8m

Whole building approach



£22m scheme

PSDS funded

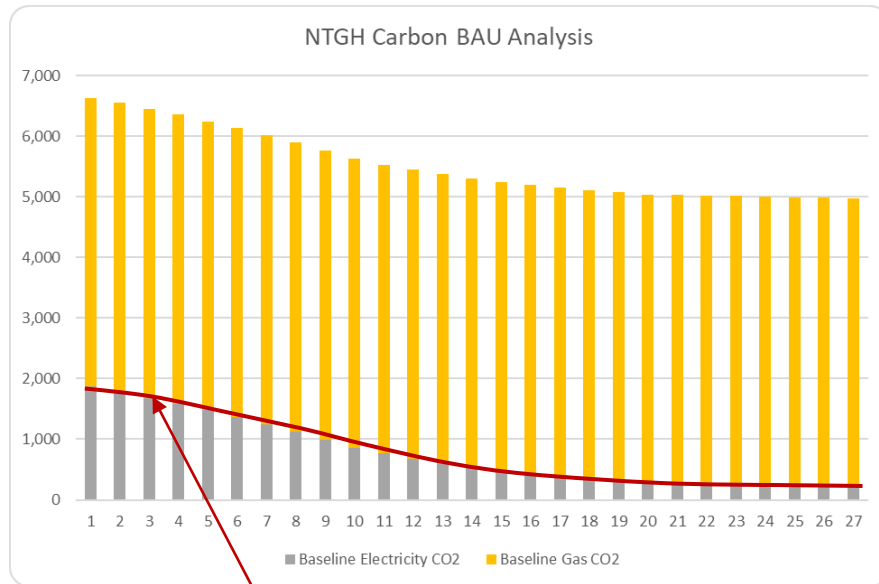
- ✓ Retrofit of cavity wall insulation, & single-glazed windows with new double-glazed units
- ✓ 3.2 MW air and water source heat pumps c.85% of annual heat demand & 250% for cooling
- ✓ Simultaneous provision of chilled water for AHU systems with spare capacity for future cooling provision
- ✓ Replacement of ageing steam infrastructure and calorifiers with a new LTHW network and plate heat exchangers.
- ✓ A new roof-mounted solar PV array of around 1.0 MWp.
- ✓ Retrofit of high-efficiency motors for air-handling plant.
- ✓ Much needed HV infrastructure upgrades. Increase from 1MVA to 3MVA

Contract duration c. 15 years

Net Zero Example - North Tyneside General Hospital

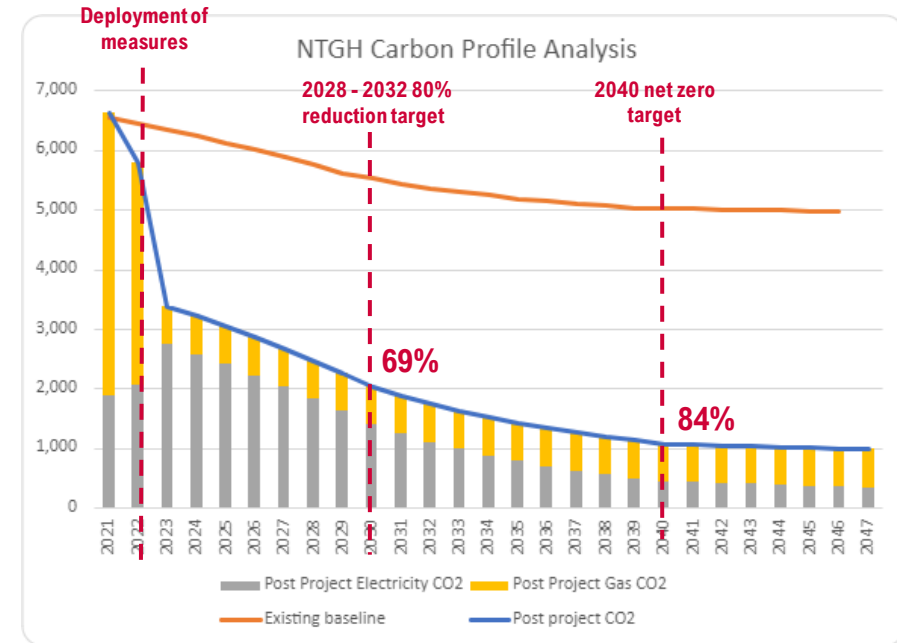
Heat decarbonisation is the priority

Before



The drop in CO2 electricity is due to decarbonisation of electricity grid inc more nuclear & renewables but less coal & gas

After



B R E A T H E

Key ingredients for a successful retrofit net zero delivery



Priority

- Driven by NZ target.... 2030, 2040 etc?
- Align with organisation strategy & also the constraints!
- Future development plan, life cycle replacement & backlog
- Heat decarbonisation on basis that this is fossil fuel generated



Business Case

- Longer payback than used to; life cycle NPV; carbon abatement £/LTtCO2e
- Leverage funds already allocated on critical backlog replacement
- Green Book is a very useful tool,
- Business impact e.g. Improve position in say Green Gown etc
- Early Net Zero roadmap essential



Funding



Development



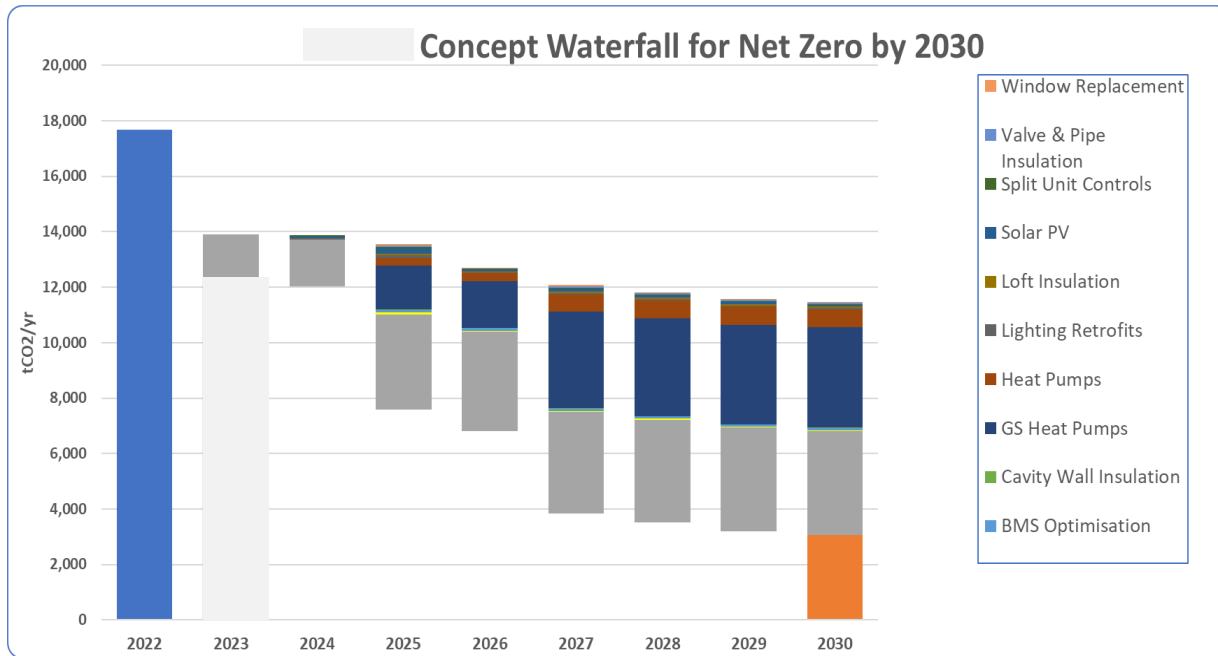
Timing



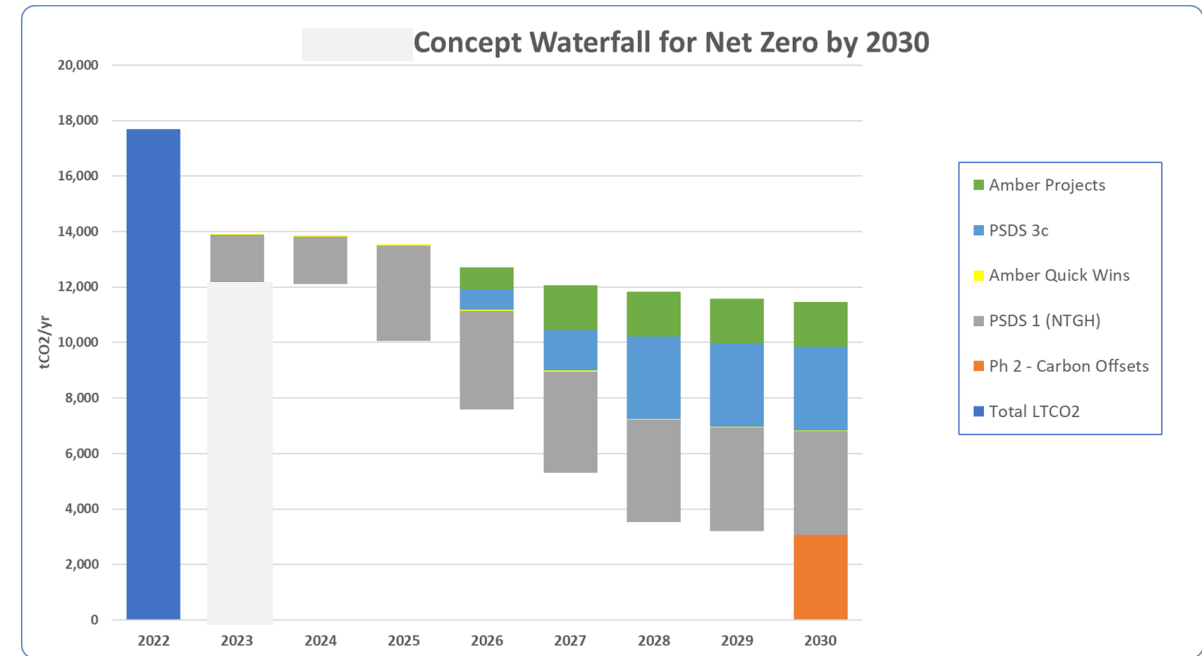
People

Net zero roadmap – what & how?

What?



How?



Key ingredients for a successful retrofit net zero delivery



Priority

- Driven by NZ target.... 2030, 2040 etc?
- Align with organisation strategy & also the constraints!
- Future development plan, life cycle replacement & backlog
- Heat decarbonisation on basis that this is fossil fuel generated



Business Case

- Longer payback than used to; life cycle NPV; carbon abatement £/LTtCO2e
- Leverage funds already allocated on critical backlog replacement
- Green Book is a very useful tool,
- Business impact e.g. Improve position in say Green Gown etc
- Early Net Zero roadmap essential



Funding

- Self funded - Invest to save; Backlog offset; PWLB now >5%!!
- Grant funding such as PSDS (Oct-23) & GHNF (Nov-23 & Feb-24)
- Third party funding such as Triple Point & Amber
- Supplier funded e.g. Power Purchase Agreement (PPA) for solar PV



Development



Timing



People

Key Points on PSDS 3c to consider:

In lieu of any confirmed information on PSDS 3c we have assumed that the funding criteria and application requirements for PSDS 3b will be applied.

- **Projects need to be substantially complete by Mar-2025 (1-year schemes TBC!)**
- **Strict criteria, gas fired end-of-life heat plant > 10-years**
- **Client contribution 12% of total project value**
- **Carbon abatement threshold <£325/LTtCO₂e**
- **An eligible technology (e.g. heat pump) will need to replace existing gas boilers or CHP**
- **Energy efficiency measures may then be included up to the abatement threshold.**
- **Ongoing operating costs may increase but these will contribute to avoided carbon.**
- **Enabling works such as electrical infrastructure upgrade is funded by PSDS 3 but is excluded from the carbon abatement analysis**
- **Direct (gas) CO₂ emissions are included in the PSDS 3 carbon analysis**
- **Indirect (electricity) CO₂ emissions are excluded in the PSDS 3 carbon analysis – measures is to mitigate electricity costs only**

What can you do?

1. **Establish the criteria for funding – end of life fossil fuel plant (>10yrs) non-negotiable**
2. **Obtain external Energy Services support that has experience in successful applications and will stand behind information**
3. **All aspects of project need to be considered and information provided as necessary – early design work adds credibility**
4. **Focus on obtaining existing asset information**
5. **Repurpose previous “failed” PSDS 3 applications & utilise existing HDPs & other previous work**
6. **Consider Opex impact – Salix test this somewhat**
7. **Agree procurement route for delivery; provides more credibility to the application, in terms of timings / assumed completion date**
8. **Ensure that senior team are engaged across all functions – senior sign off required at application**
9. **Plan the upload with IT carefully, make or break the application regardless of. Consider firewalls, connectivity, browsers, Plan B etc**
10. **Consider complimentary funding such as Self, PWLB, GHNF, Amber, 3rd party, PPAs, other, etc**

Key ingredients for a successful retrofit net zero delivery



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Development

- Early engagement of Development Partner – whole life consideration-
- Flexible entry point into the value chain
- Execution via standard works contracts - with performance guarantee options
- Open book supply chain procurement; relationship key for long lead in items



Timing



People



B R E A T H E

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Timing

- Driven by the NZ target?
- Integrate with other development activity?
- Get plans in place - funding ready schemes e.g. PSDS 3c in Oct-23
- Flexible to respond to future energy markets, policy etc



People

Key ingredients for a successful retrofit net zero delivery



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People

- All functions of an organisation will be involved
- Early engagement of people & teams
- Integration of teams – opportunities for Secondment
- Educational value – **Academic Health Science Network (AHSN)**

Conclusion



Priority

Heat decarbonisation, aligned with estate plan & critical backlog



Business Case

Marginal “paybacks”, multiple benefit, sensitive to energy price / funding



Funding

Multiple source, inc. PSDS (Oct-23), ready to go



Development

Engage development partner, early information, open book procurement



Timing

Get plans in place - funding ready schemes e.g. PSDS 3c in Oct-23



People

All functions engaged early; knowledge transfer with AHSN



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2023





Up Next...

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Speaking Now...

The NHS **2023**
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Facilities
Conference



James Saunders

Healthcare Commercial
Director - **ISS UK&I**



Delivering sustainable change for the NHS

6 July 2023

PEOPLE WHO CARE





James Saunders
Commercial Director, Healthcare
ISS UK & Ireland



In the UK, we support:

221

Buildings

58

Hospitals

36

NHS Trusts

10k

Placemakers

PEOPLE WHO CARE





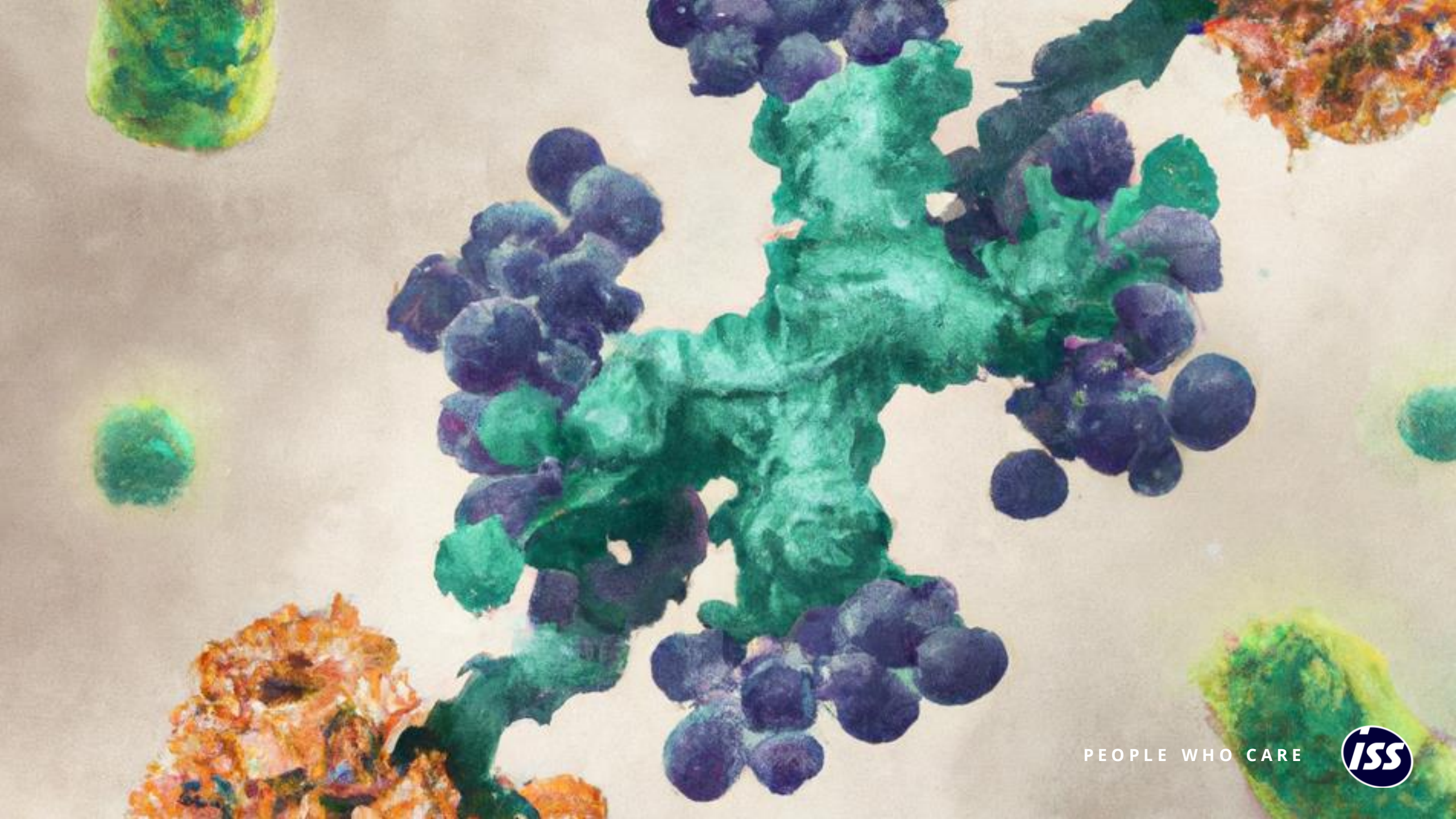
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The price of doing the same old thing is far higher than the price of change.

Bill Clinton

PEOPLE WHO CARE





PEOPLE WHO CARE





PEOPLE WHO CARE



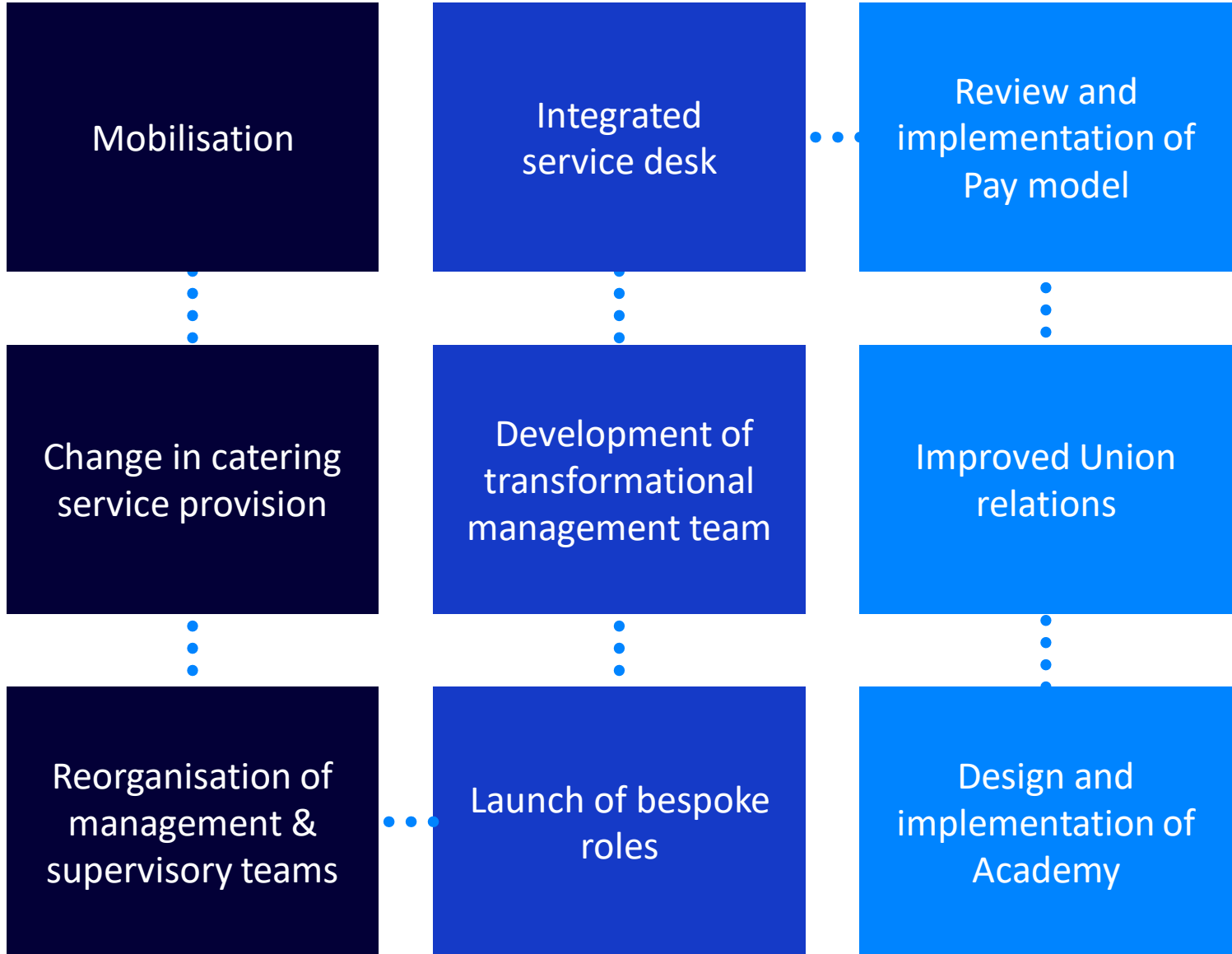


Our partnership in action

ISS and Lewisham & Greenwich NHS Trust

PEOPLE WHO CARE





ISS Healthcare Training Academy

at Lewisham & Greenwich NHS Trust

1k+

Placemakers
trained in total

74%

New starters
remain with ISS

77%

Reduction in
sickness rate

11

Internal
promotions

98%

Cleaning audit
scores achieved



“

This fabulous new learning space shows the commitment ISS have to developing their staff and creating a positive culture for all who work with us as partners at the Trust.”

Ben Travis

CEO, Lewisham and Greenwich NHS Trust

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Championing sustainable workplaces

Making material difference
to
our clients

PEOPLE WHO CARE



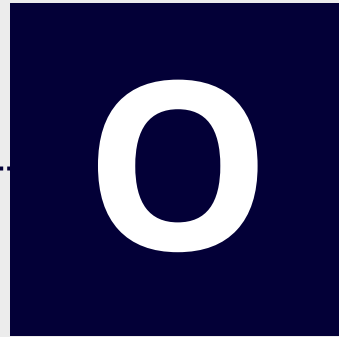
Making material difference

Our signature **ROC** Principles



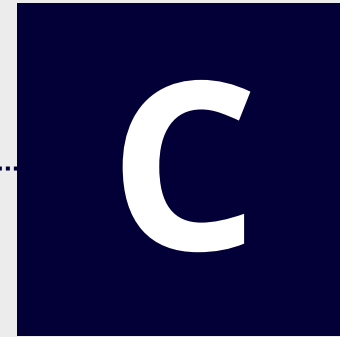
REDUCE

Reduce waste across operations, including energy, water, food and materials



OPTIMISE

Optimise consumption of all necessary resources including energy, water, food and materials



CHANGE

Change behaviours of those who use workplaces and identify areas for improvement

Making material difference



ENERGY

Global Banking Client

Upgrade and replacement of boilers
saves 11GWh, equating to
c.£3,300,000 per annum*

*Based on avg price: 30p/KWh

O OPTIMISE USAGE



Explore our full
interactive model at
issuki.com/explorer



Making material difference



ENERGY

Global Manufacturing Client

Gas consumption optimised through installation of new BMS provided additional functionality resulting in a **savings of 157,271 kWh and 29 tonnes of CO₂e in 2 months**

Boiler upgrade of existing assets **saving 2,800,000kWh and 517 tonnes of CO₂e per annum**

R REDUCE WASTE



Explore our full interactive model at issuki.com/explorer



Making material difference



FOOD

Winnow technology

Implementing our food waste monitoring and analysis platform, **Winnow**®, saved **134 tonnes of food and 722 tonnes of CO2e in 2022 alone.**

R REDUCE WASTE

C CHANGE BEHAVIOUR



Explore our full
interactive model at
issuki.com/explorer



Making material difference



FOOD

European hospital

Optimised dishwashing process, **saving 48,000 kWh and 11 tonnes of CO2e per annum**

Implemented silicon curtains to refrigerators, **saving 65,700 kWh and 15 tonnes of CO2e per annum**

R REDUCE WASTE

O OPTIMISE USAGE



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interactive model at
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Making material difference



SPACE

Nordic bank

Building portfolio and workplace optimisation **reduced sqm by 27%, saving 471 tonnes of CO2e per annum**

O OPTIMISE USAGE

C CHANGE BEHAVIOUR



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interactive model at
issuki.com/explorer





Working in partnership to deliver a
sustainable future

PEOPLE WHO CARE



Kotter's 8-Step Model



1 Create

Establish a feeling of urgency of hurriedness towards change

3 Form

Develop a strategy to bring about change

5 Enable

Empower employees to take action to incorporate changes

7 Sustain

Capitalise on wins or gains in order to produce bigger results

2 Build

Formulate a guiding coalition

4 Enlist

Communicate or put for the vision or strategy for change

6 Generate

Formulate and generate short-term goals

8 Institute

Incorporate new and better changes in workplace culture



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Q&A Panel

Panel Discussion - Delivering Net Zero for the NHS

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Tim Radcliffe
Net Zero Food
Programme Manager -
NHS England



Alan Carr
Senior Sustainability
Adviser - **Sustainability**
West Midlands



Neil Mcelduff
Senior Sustainability
Adviser - **Sustainability**
West Midlands



Kit Connick
Chief Officer Strategy &
Partnerships - **Cambridgeshire**
& **Peterborough ICB**



James Saunders
Healthcare Commercial
Director - **ISS UK&I**



Philip Tamuno
Head of Sustainability and Net Zero
- **Barts Health NHS Trust and**
Barking, Havering and Redbridge
University Hospitals NHS Trust



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Conference in 2024....

