

The Decarbonisation Agenda

Our response to *One Planet, Zero Waste Wales by 2050*

February 2022

Decarbonisation and the links to the circular economy:

1. Programme aims and objectives
2. Why....policy drivers / NHS Wales Strategy
3. How.....where to start and approach
4. Programme Structure and Governance
5. Examples of projects delivered and planned
6. Next steps

Programme aims & objectives:

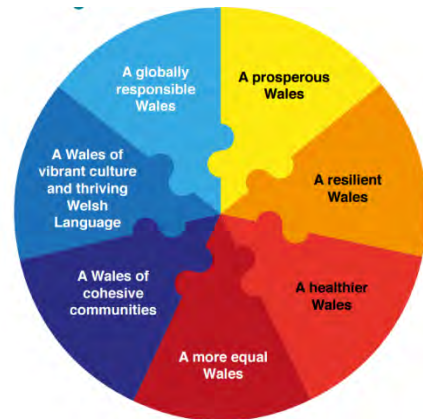
Work towards the achievement of HDdUHB Planning Objective 6G (being revised for 2022/23), namely:

- ‘By first quarter 2022/23, develop and endorse a strategic roadmap to respond to the Welsh Government ambition for NHS Wales to contribute towards a public sector wide net zero target by 2030. The Health Board will set out a work programme and implement this plan to meet the targets established in the NHS Wales Decarbonisation Strategic Delivery Plan in the areas of carbon management, buildings, transport, procurement, estate planning and land use, and its approach to healthcare including promoting clinical sustainability. Where feasible through the opportunities presented via the Health Boards transformation journey, it will look to exceed targets and establish best practice models and pilots, as exemplars for the NHS and wider public sector. The overall aim will be to reduce the Health Board’s carbon footprint to support the wider public sector ambition to address the climate emergency.’
- Embed the decarbonisation agenda and a commitment to the circular economy across the organisation.

Why decarbonisation and the linked circular economy....policy drivers

In response to multiple policy objectives and actions.

- NHS Wales requirement to develop action plan(s) to tackle the Climate Emergency and for the public sector to be net zero by 2030
- Use only our fair share of the earth’s resources by 2050 (‘one planet’ resource use)
- A net zero carbon Wales by 2050
- Zero waste (100% recycling) by 2050
- A transition to a more circular economy where we keep resources in use and avoid waste as part of our journey towards one planet resource use and zero carbon



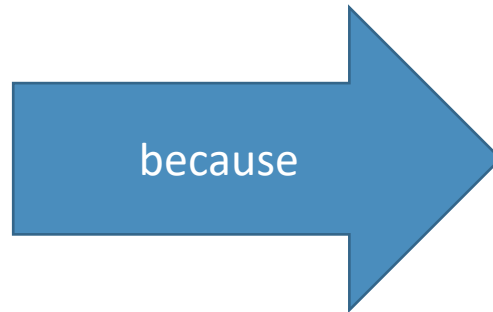
Decarbonisation and the circular economy journey....

Moving from a perception of:

Decarbonisation is a building, estates and facilities issue to be tackled

Moving to:

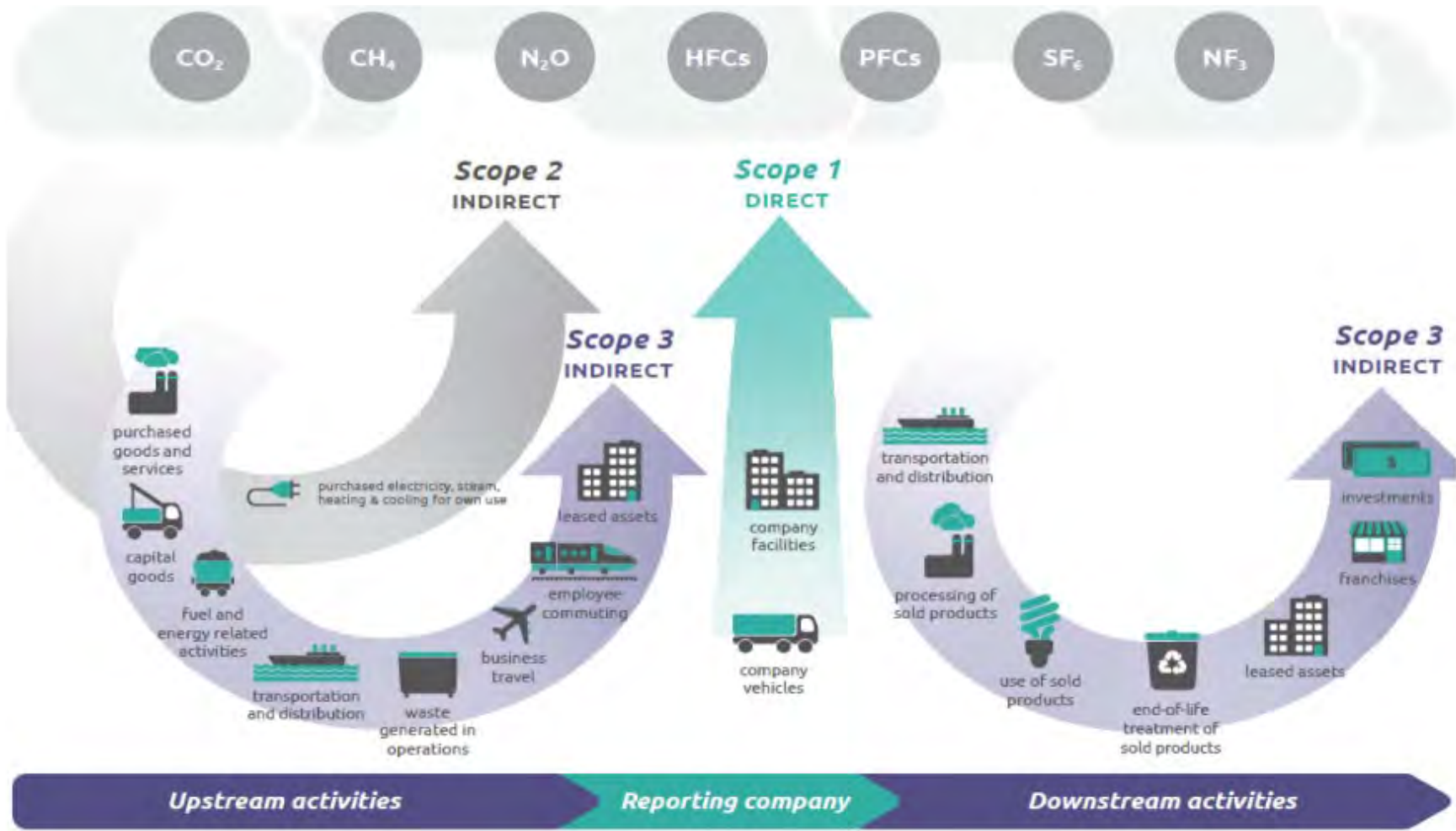
The Climate Emergency is for everyone to tackle



“The Welsh Government has set a net zero carbon target for the public sector in Wales by 2030. Priorities will include: **reducing emissions associated with buildings, transport, and procured goods and services**, while using our land to remove at least as much greenhouse gas from the atmosphere as we emit.”

Partnership Council for Wales – Joint Statement -June 2020

How.....what do we need to think about...



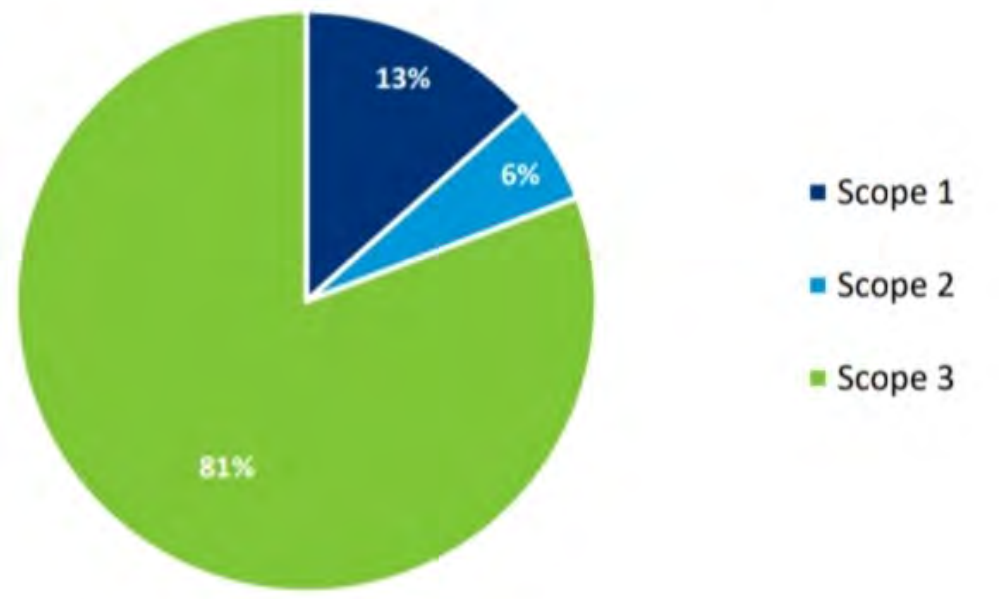
Greenhouse Gas Protocol:

- a) Scope 1: “Direct emissions from own or controlled sources”;
- b) Scope 2: Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company; and
- c) Scope 3 “All other indirect emissions that occur in a company’s value chain.”

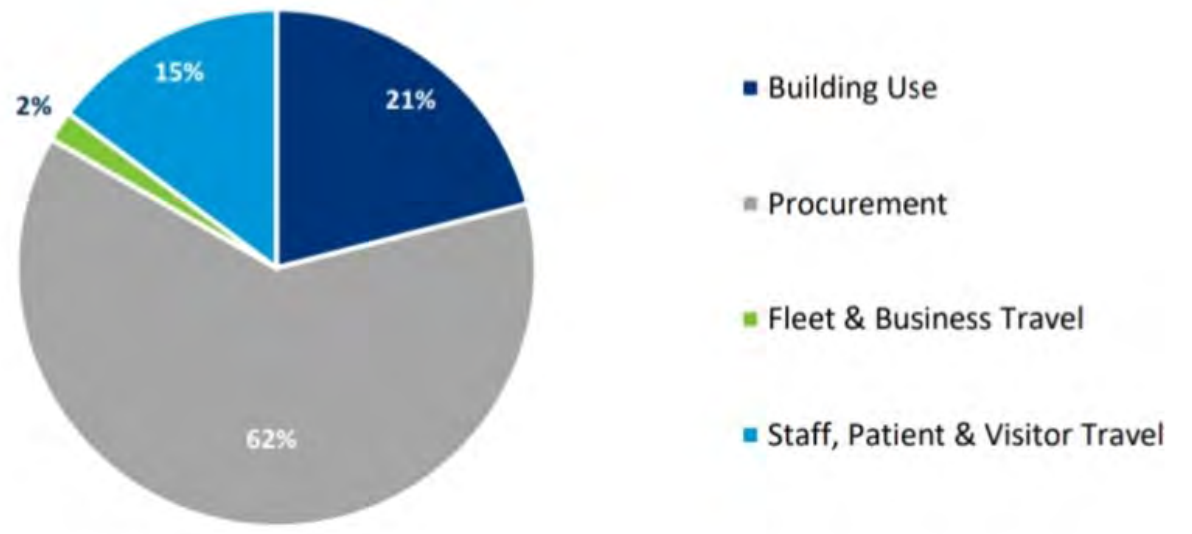
Source: Greenhouse Gas Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard

How.....where to start??.....potential for greatest impact

NHS Wales Carbon Footprint by Scope 2018/19



NHS Wales Carbon Footprint by Category 2018/19



HDUHB footprint

Footprint analysis

HDUHB footprint for FY 18/19 was calculated to be **98,854 tCO₂e**. The composition of the footprint aligns to NHS Wales overall footprint¹, with the majority of emissions (~80%) attributed to the Board's value chain. Energy consumption at HDUHB-operated sites is still a substantial emission source, totalling 19,227 tCO₂e.

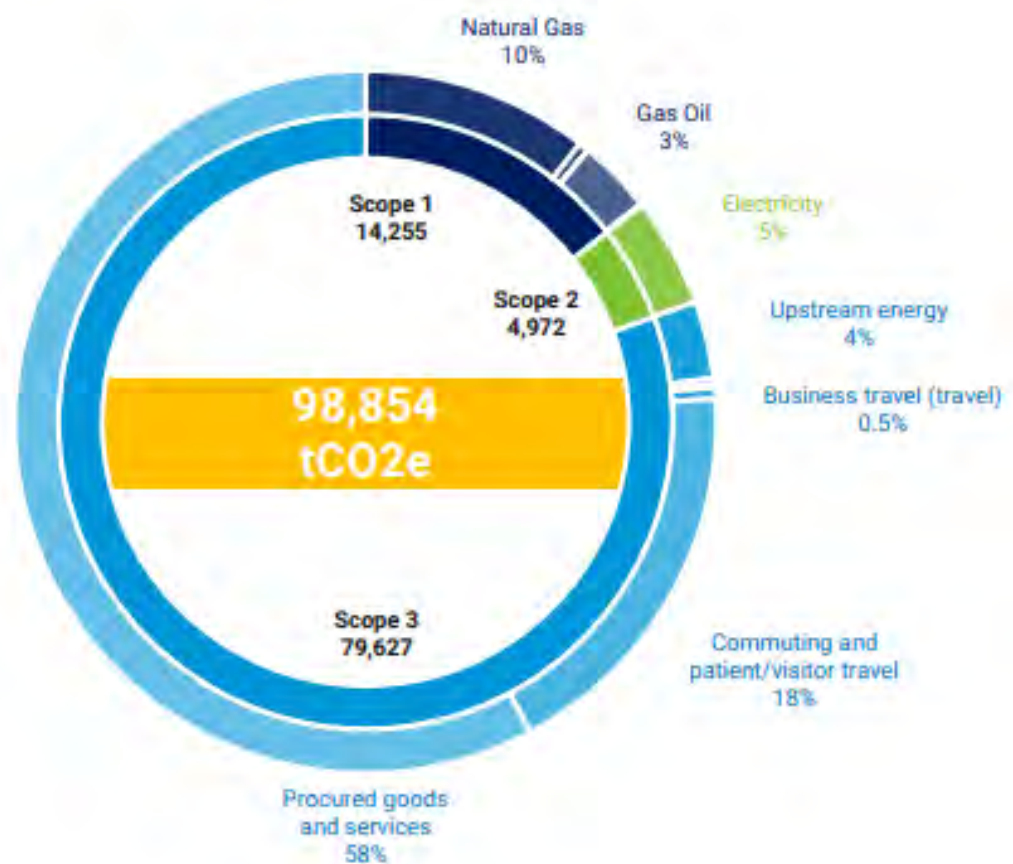
The three largest emission categories make up 86% of the total footprint:

1. **Procured goods and services** (57,109 tCO₂e)
2. **Employee commuting and patient/visitor travel** (18,067 tCO₂e)
3. **Natural gas consumption in Health Board operated buildings** (2,066 tCO₂e)

HDUHB's footprint in numbers:

-  Annual procurement spend of ~£177 million
-  Estimated 57 million miles of employee commuting and patient/visitor travel
-  Over 180,000 m² of occupied floor space

Below: Summary of HDUHB's measured footprint



Decarbonisation and the circular economy.....approach



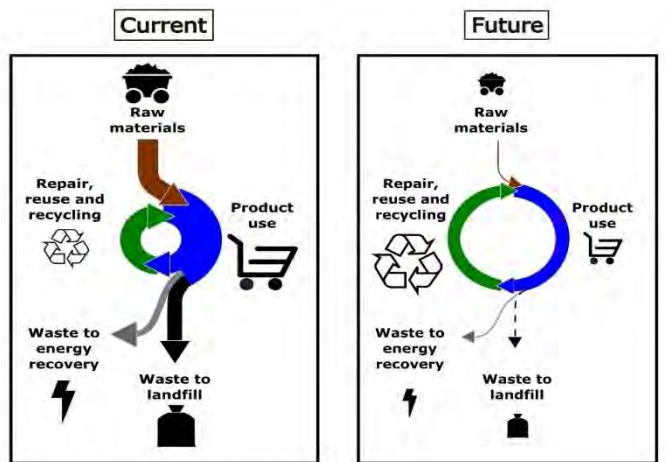
 <p>1</p> <p>We will support businesses in Wales to reduce their carbon footprint and become more resource efficient.</p>	 <p>2</p> <p>We will provide the tools to enable community action.</p>	 <p>3</p> <p>We will phase out unnecessary single use items, especially plastic.</p>	 <p>4</p> <p>We will eradicate avoidable food waste.</p>
 <p>5</p> <p>We will procure on a basis which prioritises goods and products which are made from remanufactured, refurbished and recycled materials or come from low carbon and sustainable materials like wood.</p>	 <p>6</p> <p>We will strive to achieve the highest rates of recycling in the world.</p>	 <p>7</p> <p>We will reduce the environmental impact of the waste collection from our homes and businesses.</p>	 <p>8</p> <p>We will take full responsibility for our waste.</p>

Decarbonisation and the circular economy programme implementation.....what we might do next?

- **Driving innovation and material use:**
 - Prioritise the use of sustainable and low carbon materials in our construction projects to support progress towards whole life net zero carbon for construction projects



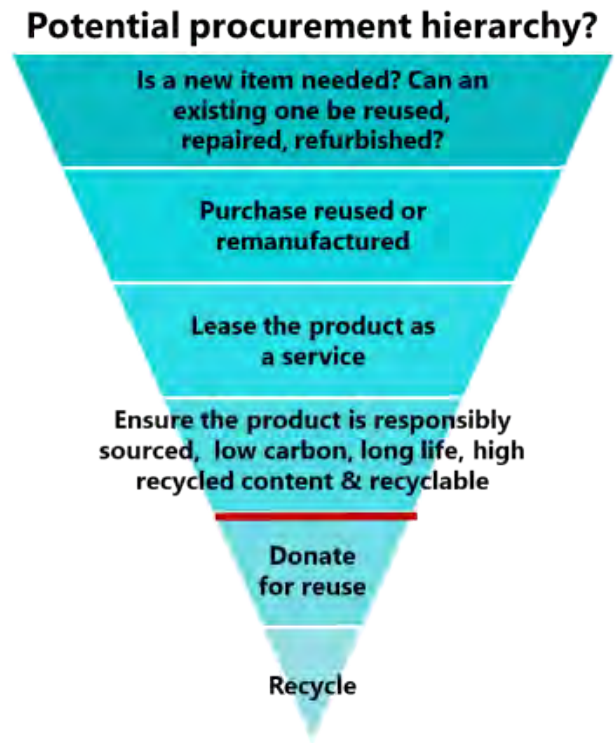
- **Upscaling reduction and reuse**
 - Promote sharing, waste prevention and re-use and support the re-use, repair sectors
 - Produce less waste during the building construction, refurbishment and at the end of the life
 - Further promote and use WARP-IT platform



- **Build on our recycling record:**
 - Separate food containers for: (1) Food waste; (2) Paper and card waste; (3) Metal and plastics waste; (4) Glass waste; (5) Textile waste; (6) Small waste electronic and electrical equipment
 - Food waste to sewer banned

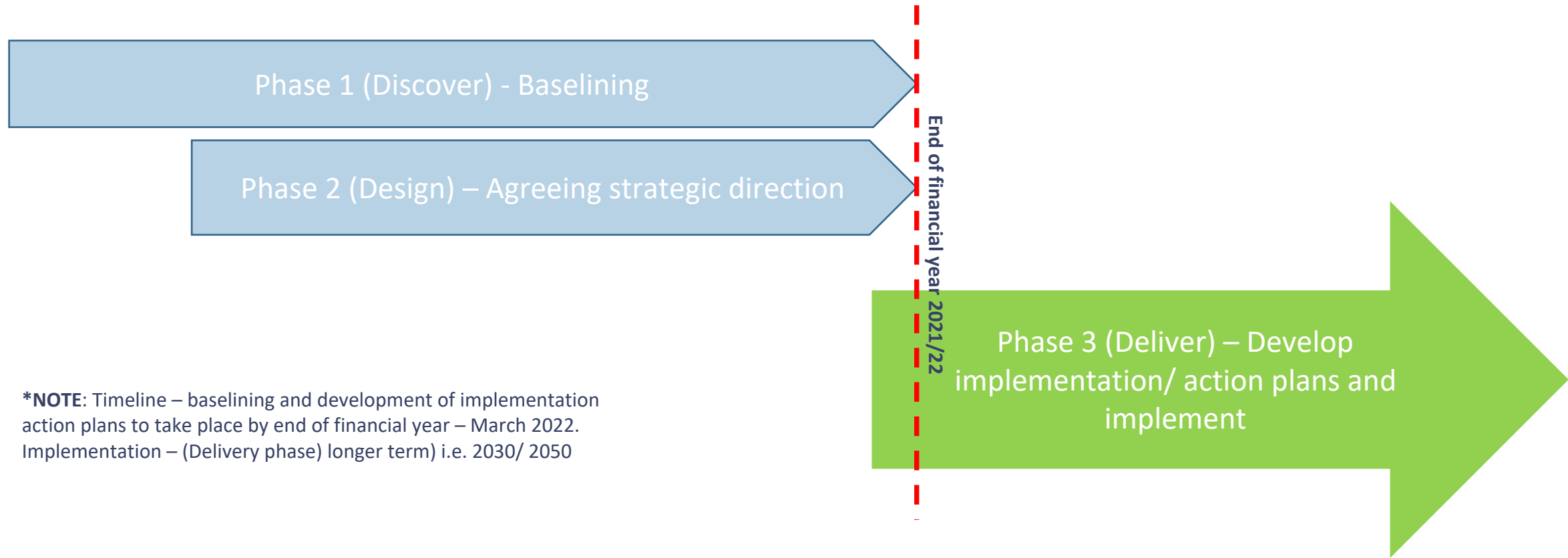


- **Sustainable procurement:**



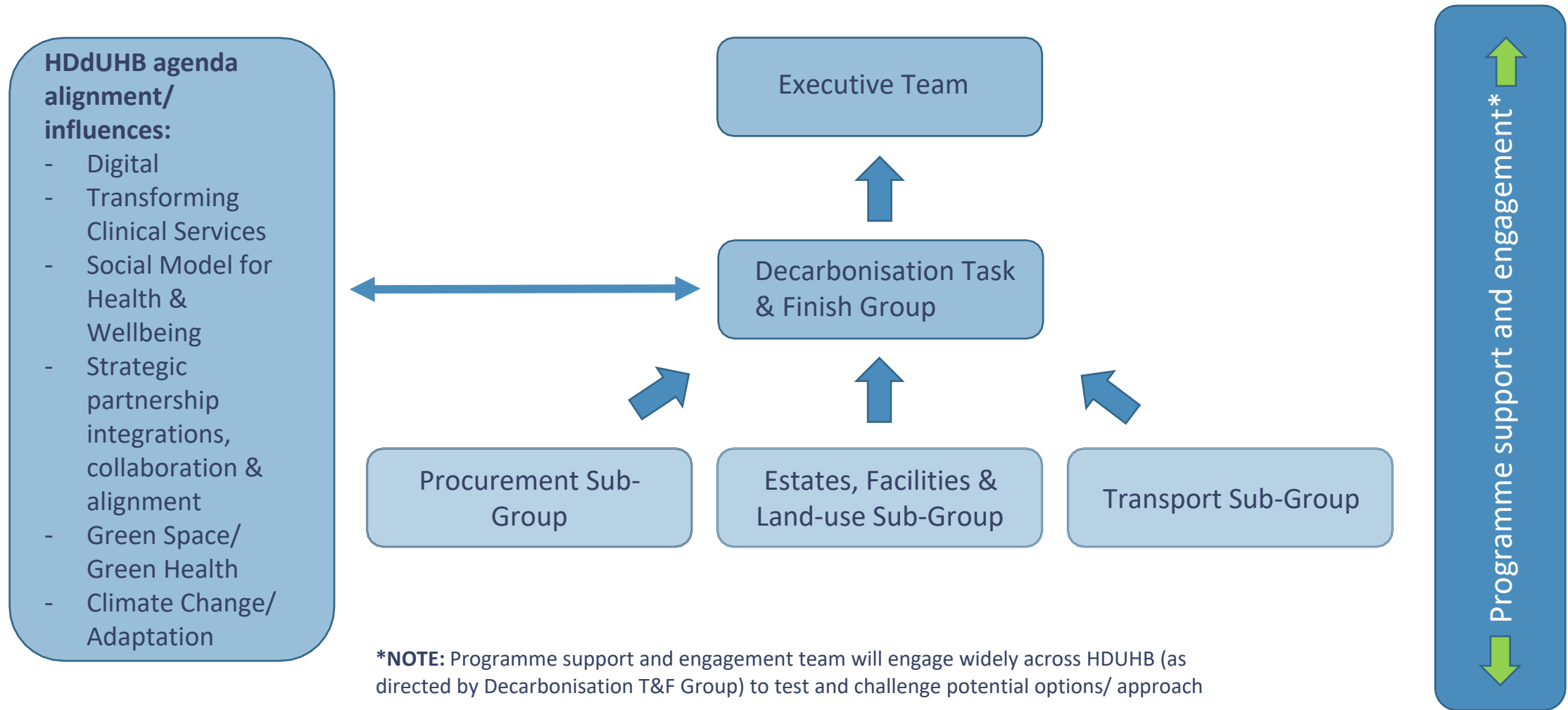
Programme activity

Discover (Phase 1 - Baseline) and defining the vision and strategic direction (Phase 2) to run concurrently – ‘Deliver’ Phase 3 will be completed after initial baseline review and strategic direction completed



***NOTE:** Timeline – baselining and development of implementation action plans to take place by end of financial year – March 2022.
Implementation – (Delivery phase) longer term) i.e. 2030/ 2050

Programme Governance



***NOTE:** Programme support and engagement team will engage widely across HDUHB (as directed by Decarbonisation T&F Group) to test and challenge potential options/ approach

Hywel Dda examples of decarbonisation scheme, delivered and planned

- The Health Board arranged the first **Energy Performance Contract** in Wales. The contract with Centrica, continues to deliver guaranteed annual savings and carbon reduction. Since its commencement in 2015, a total reduction in carbon emissions of circa 14,525 tonnes has been achieved.
- Over the last two years, the Health Board has appointed a **specialist Water Management** contractor who has been reviewing water consumption, leaks, metering infrastructure and tariffs in addition to implementing water efficiency measures such as urinal controls. To date, this has saved the Health Board circa £101,000, 81,000M³ and 30.4 tCO₂e. From the revenue returned to the AquaFund Scheme, by saving water, they donate 1% of the value of the saving to Water Aid.
- To date, the Health Board has installed **Solar Photo Voltaic Panels** at 7 sites across Hywel Dda and further schemes are planned in 2021/22 and 2022/23. In total, the completed schemes are estimated to save approximately 419,165 Kwh of electricity and £40,000 per annum. Annual carbon savings from these projects are expected to be approx. 106 tCO₂e.

Examples (Cont):

Hafan Derwen Site



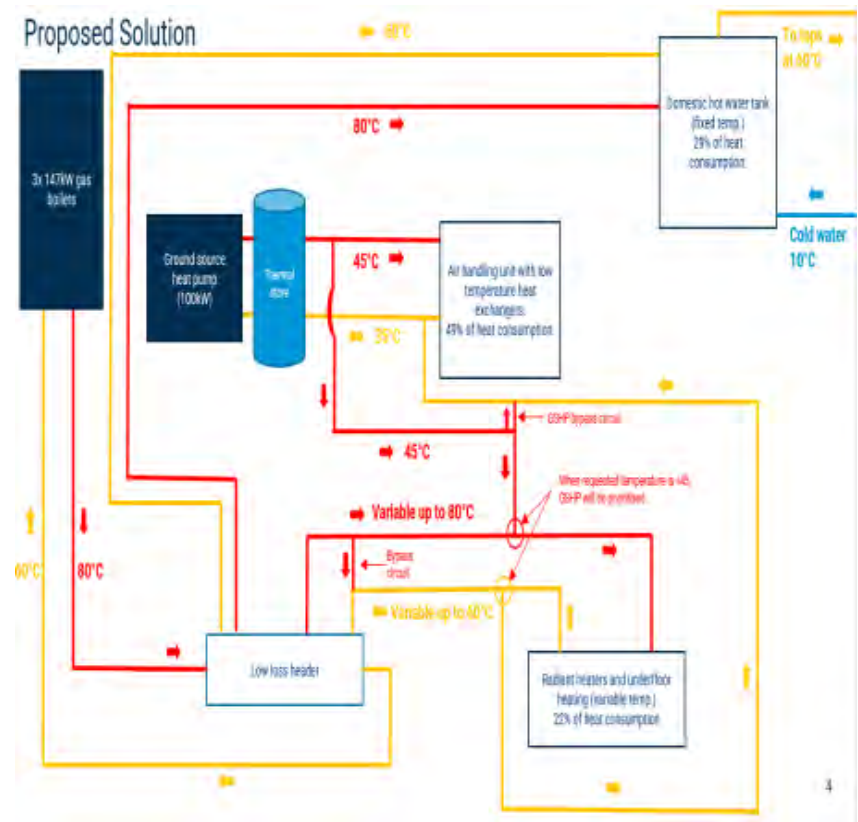
0.5MW Solar Farm

- Planning conditions have been discharged, grid application accepted
- Site works scheduled to start in Feb 2022 / planned completion July 2022
- Carbon and financial benefits
- Options around car charging infrastructure are being explored
- Develop a biodiversity scheme - added value of seating area, enhanced planting and information boards to enable staff and visitors to have access to Green space

Examples (Cont):

Cardigan Integrated Care Centre (ICC)

Air Source Heat Pump Installation



- Welsh Government Energy Service conducted a feasibility assessment for low carbon heat solutions for Cardigan ICC.
- Support was provided to the Health Board to appraise low carbon heat options and identify how to integrate a solution into the plantroom to service lower temperature heat loads.
- The recommended solution was a 100kW air source heat pump and upgrade of air handling unit heater batteries to lower temperature rated units.
- This culminated in HDdUHB securing a £325,000 grant from Welsh Government to deliver the scheme in 2021/22.
- Overall, the project is expected to save 39 tCO₂e.

Examples (Cont):

Photo Voltaic Projects in 2021/22



Bronglais General Hospital

Projects being planned:

- South Pembrokeshire Hospital roof and car port



- Withybush General Hospital site – Maintenance block, Puffin Block and Residential (subject to design approval);

Examples (Cont):



Car charging points/Electric vehicles

- Funding to install 4 x 7KW Car Charging points on each of the four Acute sites
- Funding to purchase 7 electric fleet vans to be shared between the Acute sites.
- Vehicles purchased are 4 x Vauxhall Vivaro-E L1 3100 50kWh 136PS Dynamic Auto Electric Panel Van and 3 x Vauxhall Combo-E L2 2300 50kWh 136PS Dynamic Auto Electric Crew Van
- One vehicle (Vivaro) has been delivered to date, 3 are due end of April 2022 and the remaining 3 by the end of June 2022.
- Charging points to be installed by March 2022 however, the delivered vehicle is currently charging on the Hafan Dewen charger.
- Commissioned SABA to carry out a capacity review of our Acute sites to ascertain high level costs for improving electrical infrastructure and increased capacity to enable the Health Board to meet the Decarbonisation targets within the 'All Wales Decarbonisation Strategy' for Electric Vehicle (EV) charging and PV.

Examples (Cont):

Community Nurse Electric Car ambitions:

- NHS Wales Decarbonisation Strategy dictates HDdUHB install EV car charging at all sites
- WPD / Scottish Power infrastructure required – long lead time
- Innovation – staff charge at home and use for work
- Community Nurses circa 500 cars –through lease, pool car and/or incentivised purchase?
- Agreement with 3 County Directors to explore business case costs and CO2
- If delivered, 500 EV = biggest EV suite in NHS UK

Examples (Cont):

Carbon Literacy Programme

- Led By HDdUHB Being driven and framed via the Circular Economy Innovations Programme in 2021/22
- Aimed at behaviour change – The biggest impact we can achieve for sustainable development in short to medium term
- Active positive discussions amongst Swansea Bay city region public sector partnerships to jointly develop and deliver
- Existing partners: NRW, UCS, CCC, PCC, CCC, SBUHB, HDdUHB
- Module based on one size does not fit all organisations
- Embed within staff induction and online learning
- Potential to change behaviour of 90,000 individuals within months

Next steps

- Agree overall direction of travel – planned Board update in June 2022;
- Support the Carbon Trust Appointment – includes series of workshops to inform direction and establish development of costed actions plans in areas of transport, procurement, buildings and wider healthcare;
- Ensure wider buy-in with a focus on awareness and engagement through a range of initiatives – hybrid working, clinical innovation work, Carbon Literacy, Sustainability and Decarbonisation video etc.
- Work to align our carbon reporting systems with Welsh Government.



This Health Board, through its transformational ambitions has the opportunity to meet and exceed targets through delivery of best practice. The journey has begun and it is imperative that decarbonisation is core to our business.