NHS

Arden&GEM

Integrated Resource Planning Network

HELPING SYSTEMS TO IMPROVE VALUE

Proposal for Early Adopters: Net Zero Health and Care Pathway Emission Intelligence Tool

October 2024

Arden&GEM

Objective

This proposal offers early adopters the opportunity to engage with the **Net Zero Health and Care Pathway Emission Intelligence Tool**. Early adopter organisations will participate in a **4-6 week no-cost testing and co-design phase**, which is a **mini version of the Essential/ Diagnostic Package**. This phase will focus on one key priority pathway, providing early insights into decarbonisation and operational improvements before transitioning into full paid packages. The primary goal is to accelerate **decarbonisation**, improve **operational efficiency**, enhance **clinical quality**, and elevate **patient outcomes**. The programme supports the NHS's **triple aim** of improving population health, enhancing care quality, and ensuring financial sustainability.

Context

As part of the NHS's mission to achieve **net-zero carbon emissions by 2040**, the **Net Zero Health and Care Pathway Emission Intelligence Tool** plays a pivotal role in tracking, evaluating, and reducing carbon footprints across health and care services. Decarbonising care delivery will lead to **better health outcomes**, reduce inequalities, and optimise resource usage across services. Early adopter organisations will benefit from **insights into one key priority pathway** through a no-cost trial, which mirrors the functionality of the **Essential/ Diagnostic Package**, but on a **smaller scale**. This phase enables early identification of decarbonisation opportunities, preparing organisations for long-term system optimisation.

Key Pathways and How the Tool Supports Them

Primary Care
The Net Zero Tool helps monitor and reduce emissions in primary care by identifying opportunities to optimise appointment structures, increase virtual consultations, and improve resource utilisation. By enhancing these efficiencies, the tool contributes to reducing environmental impact while maintaining high-quality patient care.

Community Care
For community-based services, the tool tracks emissions related to care delivery, such as home visits and remote monitoring. It provides insights into how these services can be optimised, reducing travel-related carbon emissions and improving the coordination of care. This ensures that services are delivered more sustainably while maintaining patient access and quality.

Clinical Condition/Specialist Pathways
In specialist clinical pathways, such as those for cardiology, oncology, or respiratory conditions, the Net Zero Tool tracks resource utilisation and emissions specific to treatment protocols. It helps optimise the use of medical equipment, reduce unnecessary patient transport, and integrate sustainable practices without compromising clinical outcomes or patient safety.

Ambulance Services
Ambulance services are essential to the NHS's emergency response, often involving resource-intensive operations such as vehicle usage and patient transfers. The Net Zero Tool helps track and reduce emissions across key ambulance pathways:

- **Hear and Treat**: Enables treatment over the phone without dispatching an ambulance, reducing the need for vehicle use and cutting emissions.

- **See and Treat**: Optimises on-site treatment by tracking vehicle emissions and reducing fuel consumption through route optimisation and minimising idling times.
- **See, Treat, Convey**: Monitors emissions from patient transport, exploring opportunities for low-emission vehicles and optimising vehicle allocation. It also identifies cases suitable for less resource-intensive care options.

Hospital Sites/ Care Settings

For hospital sites or care settings, the Net Zero Tool optimises energy use, transport logistics, and supply chain management. It integrates calculations for sites and facilities, equipment, medical gases, waste, water, medicines, liquids, drugs, and treatment materials, providing a comprehensive approach to reducing the hospital's environmental footprint. By identifying areas where green technologies can be implemented, the tool supports the adoption of sustainable practices while maintaining high standards of patient care and operational efficiency.

Integrated Care Services

The tool provides a comprehensive overview of integrated care pathways, facilitating decisions that reduce emissions and enhance patient outcomes, especially for patients with chronic conditions requiring long-term care management.

Overview of Proof of Value

The proof-of-value project will pilot the Net Zero Health and Care Pathway Tool with early adopter organisations across health and care services. Using one area to pilot the tool will support the reduction of carbon emissions, improve clinical and operational efficiency, enhance patient outcomes, and encourage collaboration aligned with the NHS's sustainability objectives.

Key Objectives

- **Population Outcomes:** Develop sustainable care pathways that lower environmental impact while enhancing health outcomes, particularly for patients with chronic diseases such as respiratory and cardiovascular conditions.
- **Social Value:** Promote community engagement through health interventions, address social determinants of health, and create green jobs.
- **Clinical Quality and Efficiency:** Identify opportunities for carbon reduction across care pathways while maintaining or enhancing clinical quality and operational efficiency.
- **Triple Aim Alignment:** Support the NHS's goals of improving population health, enhancing patient experience, and reducing healthcare costs through sustainable, efficient practices.

Benefit Measurement Approach

The success of this project will be assessed through social value and care delivery outcomes:

- **Social Value Measures:** Focus on promoting local job creation, responsible growth, improving community health, and fostering social innovation.

- **Care Delivery Measures:** Evaluate clinical quality, patient engagement, operational efficiency, staff well-being, resource utilisation, and reductions in carbon emissions.

Benefits to Early Adopters

1. **Short-term Design Engagement (4-6 weeks):**
   Early adopters will gain insights into one key priority pathway during a no-cost testing and co-design phase. This phase offers a mini version of the Essential Package – Diagnostic, focusing on identifying early decarbonisation wins and opportunities to improve operational efficiency.

2. **Transition to Priced Packages:**
   After the no-cost phase, early adopters can transition to the full Essential Package – Diagnostic, or other paid packages, for extended support and optimisation. This ensures long-term engagement and sustainability for organisations looking to continue their decarbonisation journey.

3. **Research & Design Authority Seat:**
   Organisations opting for the Enhanced Package (1-Year Support) or Sustainable Annual Package (Renewable) will gain a seat on the Research and Design Authority, allowing them to influence future tool developments and enhancements collaborating with other champions and allowing benchmarks to be generated. .

Return on Investment (ROI)

The Net Zero Health & Care Pathway Emission Intelligence Tool is designed to deliver measurable savings and resource optimisation, ensuring early adopters realise significant ROI through their participation.

1. **Energy Savings:**
   - A 5-15% reduction in energy consumption, resulting in operational cost savings through optimised energy use.
2. **Vehicle Emissions Reduction:**
   - A 15-20% decrease in patient conveyances through the enhancement of Hear and Treat and See and Treat pathways, leading to lower fuel and maintenance costs.
3. **Operational Efficiency Gains:**
   - Efficiency improvements of up to 20% in resource allocation, increasing productivity and reducing operational costs.
4. **Resource Optimisation:**
   - A 10-25% reduction in unnecessary resource usage, driving down costs related to clinical supplies and medical equipment.
5. **Health Outcomes Improvement:**

- Prevention and improved management of conditions impacted by environmental factors could lead to a 10-15% reduction in hospital admissions, providing significant savings in acute care service costs.

Example ROI for Early Adopters:
For a Trust with a **£100 million** annual budget, achieving a **10% reduction** in **resource consumption** could result in **£10 million in savings,** translating to an **ROI** of **£2** to **£3** for every **£1** invested**.**

Methodology

- **Tool Deployment (Free as Part of Pilot):** The tool will be deployed to early adopters, demonstrating its ability to reduce emissions.
- **Sustainability Training (Paid Service at Reduced Cost):** Teams will undergo CPD-accredited training to maximise the tool's effectiveness in supporting sustainability goals.
- **Decarbonisation Strategies (Paid Service at Reduced Cost):** Tailored strategies will be developed to optimise resources and adopt low-carbon technologies.
- **Innovation Sprints (Paid Service at Reduced Cost):** Workshops designed to accelerate sustainability efforts will be provided.
- **KPI Tracking (Paid Service at Reduced Cost):** KPIs related to health outcomes, social value, and carbon footprint will be monitored for early adopters.
- **Evaluation (Paid Service at Reduced Cost):** A comprehensive evaluation of the tool's impact on clinical outcomes, operational efficiency, and sustainability will be conducted.

Structured Engagement Process

1. **Expression of Interest (EOI):**
   Submit an EOI to join the early adopter programme.
2. **Stage 1 – Early Adopter Phase (Test & Co-Design):**
   - **Duration**: 4-6 weeks
   - **Focus**: Testing and co-design of one key priority pathway.
   - **Outcome:** Early insights into carbon reduction potential and resource optimisation, delivered at no cost through a mini version of the Essential/ Diagnostic Package.

Gateway: Following the initial phase, organisations can transition into priced packages for further engagement, broader pathway integration, and continued support.

3. **Stage 2 – Priced Packages:**
   Early adopters can choose from the following packages:
   - Essential/ Diagnostic Package

- Enhanced Package (1-Year Support) - with a seat on the Research and Design Authority.
- Sustainable Annual Package (Renewable) - with a seat on the Research and Design Authority.

Pricing Table after free period

Package	**Essential Package – Diagnostic**	**Enhanced Package (1-Year Support)**	**Sustainable Annual Package – Renewable**
Purpose	Short-term exploration	1-year operational support	Long-term optimisation
User Licenses	0-5 users (£10,000)	0-5 users (£10,000)	0-5 users (£10,000)
	5-10 users (£20,000)	5-10 users (£20,000)	5-10 users (£20,000)
	10-20 users (£40,000)	10-20 users (£40,000)	10-20 users (£40,000)
Data Integration	Not included	Up to 2 pathways (£6,000)	Already integrated
Training (Mandatory)	2 half-day sessions (£800)	2 half-day sessions (£800)	2 half-day sessions (£800)
Innovation/Acceleration Hackathons (Mandatory)	2 half-day sessions (£3,200)	2 half-day sessions (£3,200)	2 enhanced half-day sessions (£10,000)
Support	Limited to diagnostic	1-year troubleshooting	Continuous optimisation
Research & Design Authority Seat	Not included	Included	Included
Cost Range	**£14,000 – £44,000**	**£20,000 – £50,000**	**£35,800 – £65,800**

Process for Developing the Proof of Value

Stage	**Description**	**Deliverable**	**Timeline**
Discover	Engage stakeholders to understand local requirements and opportunities	Site selection and stakeholder engagement report	Week 1-2
Design	Develop a tailored implementation plan and training programme	Comprehensive project plan and training materials	Week 3-4

Stage	Description	Deliverable	Timeline
Deliver	Implement the tool and conduct training	Progress reports and training completion	Week 5-8
Embed	Monitor KPIs, evaluate the impact, and provide recommendations for scaling	Final evaluation report	Week 9-12

Requirements from Early Adopters

To ensure the successful execution of this proof-of-value project, participating health and care services must provide:

- **Leadership Engagement:** Commitment from leadership to drive engagement and champion the initiative.
- **Resources:** Access to facilities, data, and technology required for the tool's deployment and testing.
- **Active Participation:** Involvement from clinical and operational teams in training, tool implementation, and innovation sprints.
- **Governance:** A governance framework to oversee the project, ensuring alignment with sustainability and quality goals.

Nominations for Participation

Nominations for early adopters can be submitted by stakeholders within the health and care sector. To submit a nomination, please email the project lead at agem.integrated-planning@nhs.net. Selected sites will be notified within two weeks of submission.

Conclusion

The Early Adopter Programme offers organisations the opportunity to experience a **mini version of the Essential Package – Diagnostic** at no cost for 4-6 weeks. This allows them to engage with the tool, identify early decarbonisation wins, and transition smoothly into paid packages for extended support. Higher-tier participants will gain a **seat on the Research and Design Authority**, providing a unique opportunity to shape the future of the tool and contribute to its ongoing improvements.

This presents an opportunity to integrate sustainability into health and care pathways, contributing to the NHS's net-zero goals while improving clinical and operational efficiency. By aligning with the NHS's triple aim, this initiative will help reduce carbon emissions, enhance care quality, and ensure long-term sustainability for health and care services across the UK.

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