

Servita

Servita Green Tech Innovations in HealthCare

Feb 2024

Strictly Confidential



Agenda

Introduction to
Servita



Virtual Hospital and
Remote Patient
Monitoring



National Video
Consultation -
Through the NHS
App



Background of
Wayfinder



Overview of Initial
Environmental
Benefits of
Wayfinder



The Environmental
Study with Greener
NHS



Servita's Global Footprint, Sector Expertise, and Core Services

Delivering services and solutions in several international markets...



UK



UAE



Qatar



KSA



Singapore



Malaysia



Argentina



Uganda

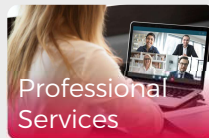
Focus on Digital health, while serving other sectors delivering transformative impact ...



Healthcare



Government



Professional Services



Transport



Energy & Resources



Telcos



Consumer Markets



Defence








Some of our Services...

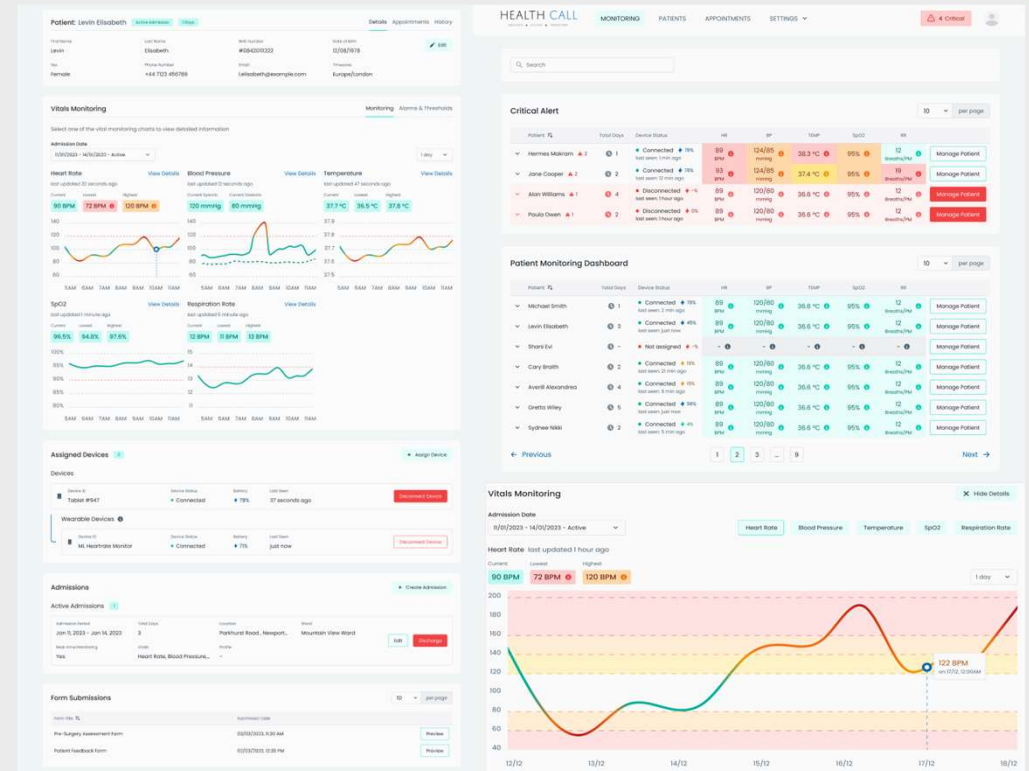
- Strategy & Innovation
- Programme & Project Delivery
- Organisational Design & Process
- Workforce Transformation & Change
- Technology Delivery
- Enterprise Architecture & Data
- Cybersecurity & Information Governance
- Service Design & Management
- Commercial Management & Procurement
- Sustainability Advisory
- Agile & DevOps Transformation
- Clinical Safety Engineering

Virtual Hospital and Remote Patient Monitoring

Servita is privileged to have developed and provided the first national implementation of their premium Virtual Ward and Remote Patient Monitoring platform. This is currently being rolled out across NHS Wales and the Northeast - North Cumbria Region.

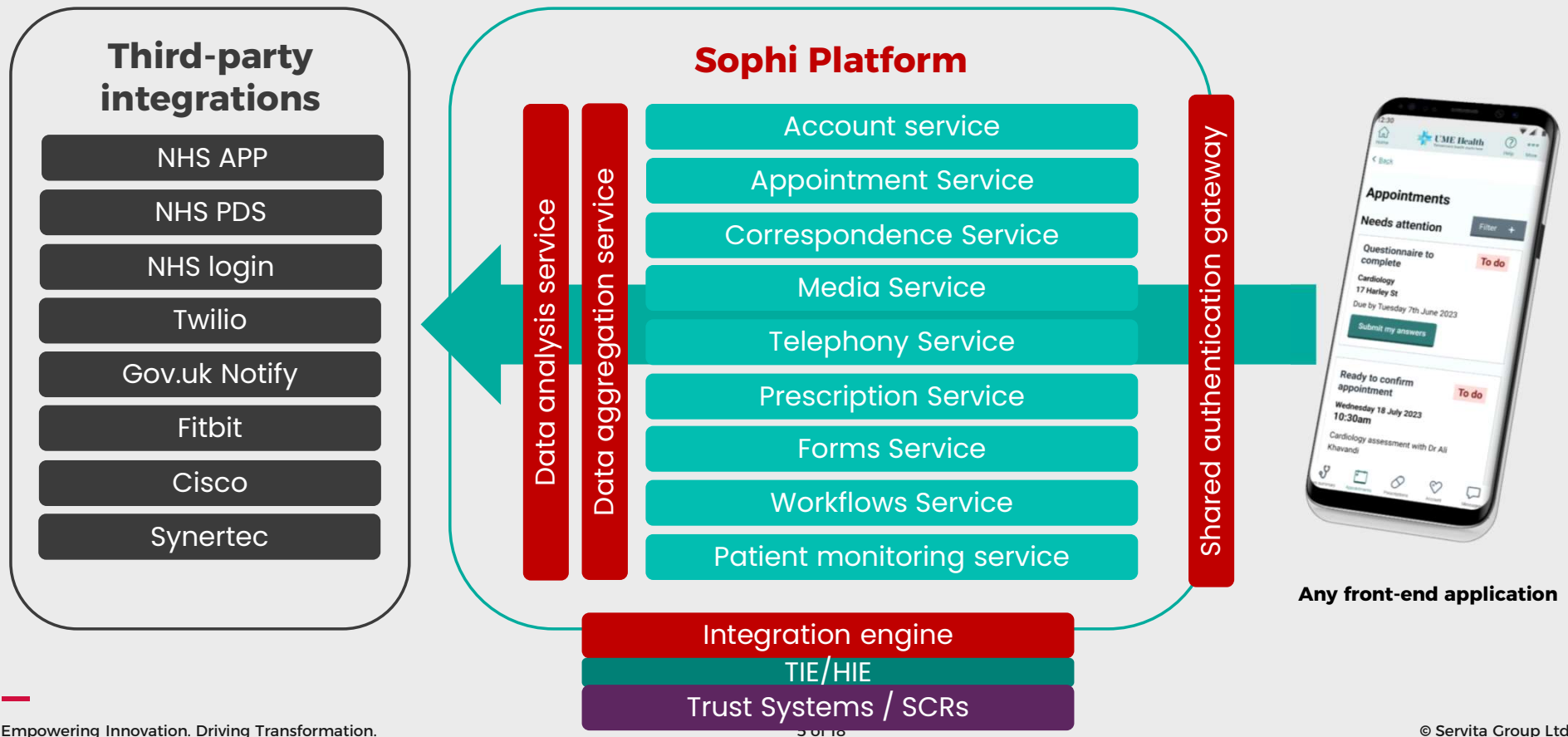
The platform delivers unique advanced features such as:

-  National Early Warning System Algorithm for preventative alerting
-  Clinician-led designs and layout for back-office reporting, charts and graphs
-  Highly sophisticated and secure RBAC system and easy to use, but highly secure QR code authentication pattern for patient-facing app
-  In app scheduling and virtual consultation module
-  Infinitely scalable – able to be used as a national virtual hospital
-  Integrates with a range of medical and wearable devices
-  Integration with EMR including deep bi-directional integration via custom Integration Engine



Conceptual Architecture with Sophi

Servita take a modular approach to building health care products, enabling customers to build bespoke products rapidly by building on proven Sophi technology. Sophi can accelerate your product to production supported by proven and assured technologies.

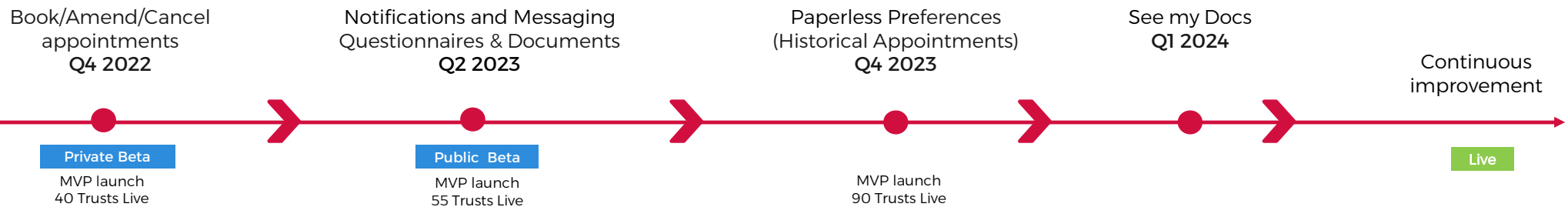


Background of Wayfinder

Mission 5 was commissioned by the Secretary of State / DHSC to look at how the NHS could use national digital channels [NHS App and Website] to empower users to book and manage elective care appointments digitally. In Q4 2022, Wayfinder public beta went live with the core functionality of enabling users to book and manage appointments via the NHS App.

Today, in parallel to increasing the coverage of Wayfinder across the UK, the programme continues to surface additional features in the NHS App. The Wayfinder programme is currently delivering phase 3 scope that includes: Paperless Preferences, Historical Appointments, See my Docs and Linked Appointments.

Wayfinder functionality will help reduce Wait Times, DNAs, Clinical Cancellation and the elective care backlog, it will also increase traffic to the NHS App and make greater use of technology. Servita were procured to design and build the Patient Care Aggregator that enables this functionality to be surfaced in the app. Servita have also been engaged to deliver Programme Management, PMO and Sustainability Leadership.



Wayfinder: What it looks like

Primary care appointments

- Accessed through existing IM1 implementation
- Book a new GP appointment
- See all booked appointments including type, location and date
- Ability to link directly into an appointment to cancel a booking

Secondary care appointments

- New: Secondary referrals and appointments screen

eRS via aggregator API

- See directly bookable and indirectly bookable referrals
- See all Referral Advisory Service requests including status
- See booked appointments from directly bookable referrals
- Ability to deep-link into an eRS item to edit or cancel a booking

Portal provider data via aggregator API

- See all secondary care appointments including location and date
- Ability to seamlessly deep-link into a Portal to view more detail

Portal providers via deep link

- Providing patients with a single point of contact for the services currently administering their care.
- Locally provided guidance which can help prepare for appointments
- Cancelling/amending bookings - where existing and simple to implement



NHS Login is required for all integrated parties as a single authentication mechanism.

Background of Wayfinder

Architecting for Sustainability

The AGG was designed and purpose built using a stateless architecture which queries and processes Trust data in real time minimising the need for storage.

The AGG leverages Kubernetes to achieve horizontal auto-scaling, ensuring the compute power provisioned does not exceed that which is required.

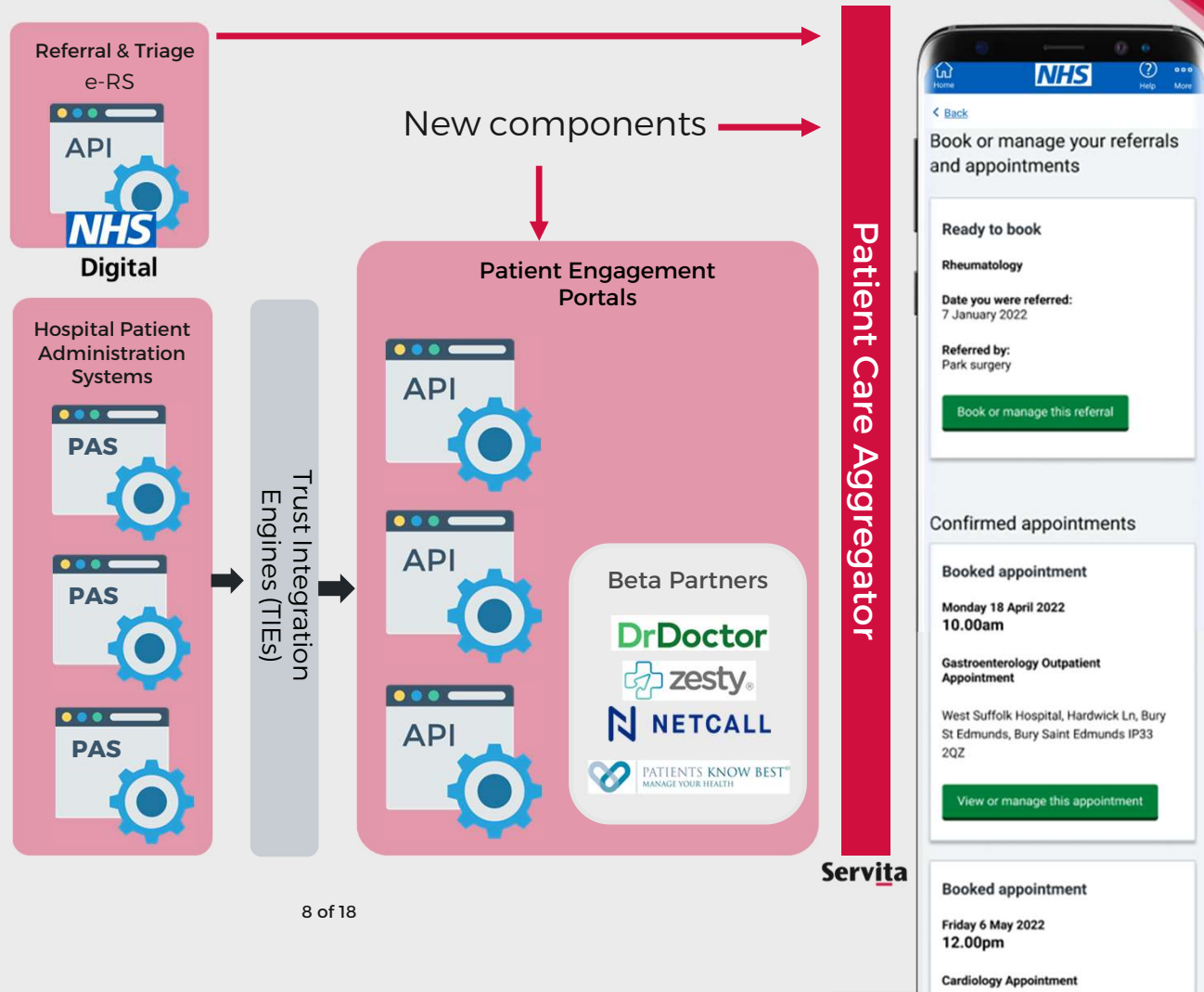
Further optimisation of compute power is achieved using a NodeJS codebase. NodeJS is commonly regarded as the most performant code base available, and was therefore chosen to yield a platform that can efficiently deliver a national service in line with a sustainability agenda.

Storage

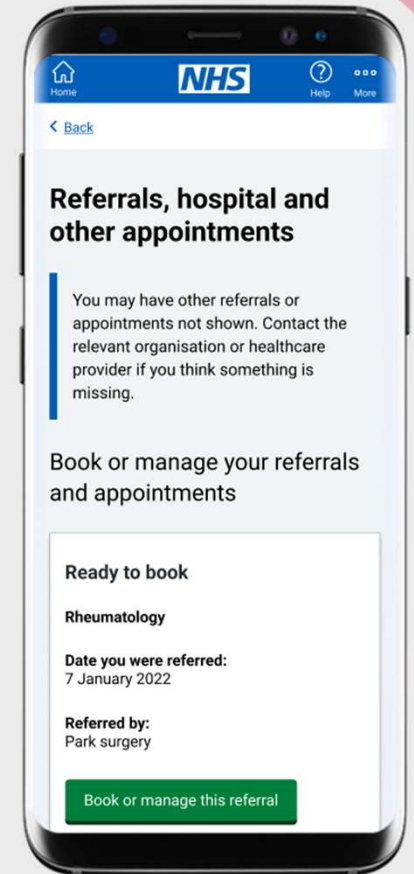
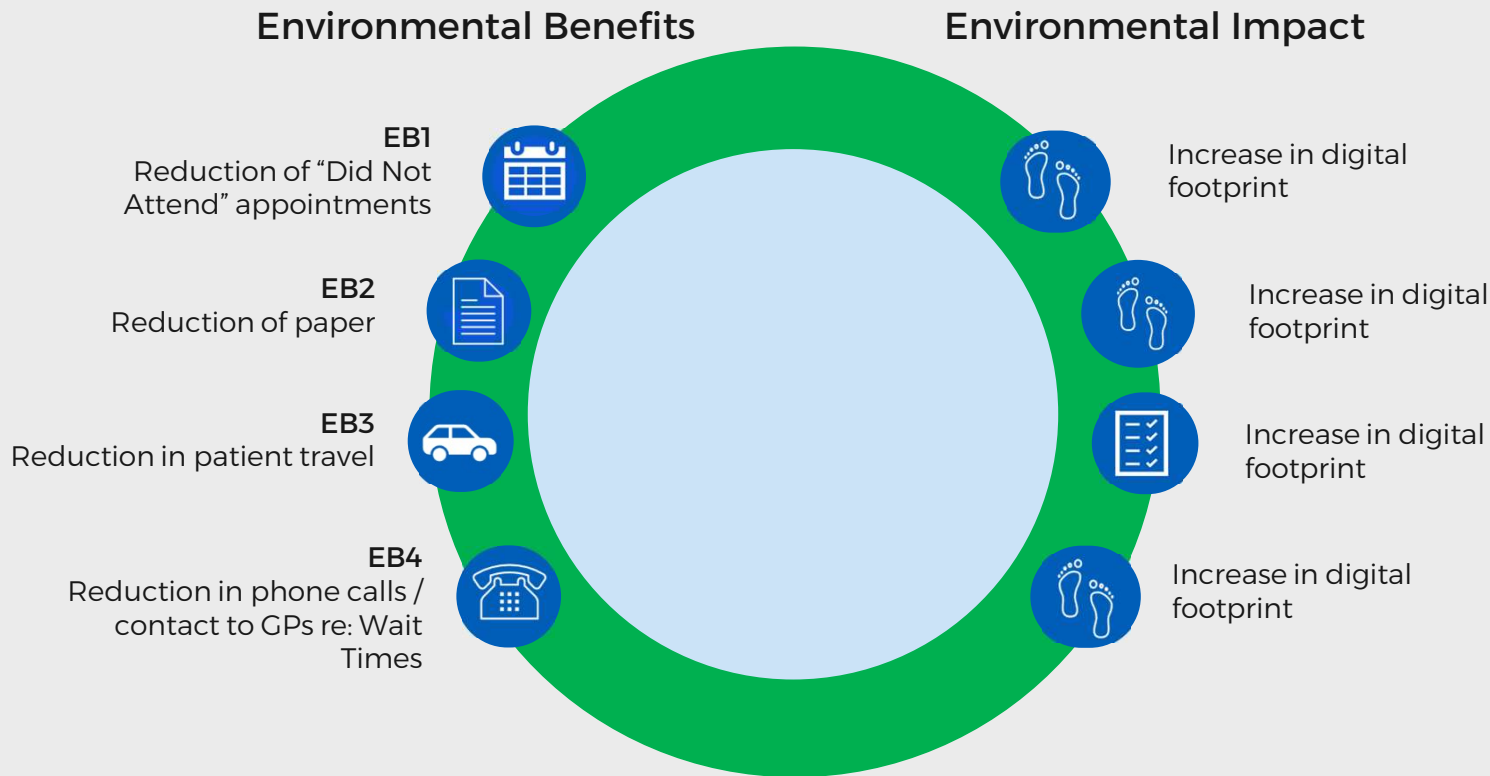
AGG is cloud-hosted in AWS
During the reporting period of Jan - Aug 2022, the emissions created as a result of the storage and processing of data in the AGG was officially reported to be under 0.1 MTCO2e (Metric Tons of Carbon Emissions)

Given Amazon's power purchase agreements and purchase of renewable energy credits, AWS is reporting that the AGG is NET Zero.

NB this data is non-complete and will be enhanced/upscaled through 2023/24



Overview of Initial Environmental Benefits of Wayfinder



Environmental Benefit 1 : Reduction of Did Not Attends

Why

- The NHS report 7,900,000 DNAs / year (equating to 51,974 / trust)
The Greener NHS calculates an average of:
 - 22 kg carbon are emitted (CO₂e) / by the hospital to service an appointment and 4.25 Kg CO₂e / appointment as a result of patient travel

Wayfinder Impact

- Wayfinder have a 45% confidence in the Wayfinder functionality enabling a reduction of DNAs by 32% in Green sites and by 15% in Brown sites
- Wayfinder aims to **reduce 488,111 DNA's** / year



Environment Benefit

- Reducing DNAs, avoids “wasting” CO₂e
- The Greener NHS have modelled **8,633,968 kg CO₂e** – without an appointment being completed – i.e. wasted

Environmental Benefit 2 : Reduction of Paper

Why

- The NHS produce 158million letters annually (averaging 2 A4 sheets of paper)
- NHS Estimates 55p cost / letter. It is estimated that there is 400gCO2e for delivering a letter.
- Each letter will require an envelope, stamps and resources required for delivering the letters
- Reduced printing of letters will also reduce carbon emissions relating to the production of paper, printers, inks and resources to print.

Wayfinder Impact

- We have a 45% confidence that Notification of appointments via patient engagement portal or NHS App will enable:

63million less A4 sheets to be used for letters 10million fewer letters to be posted



Environment Benefit

- Total Kg CO2e saved:

6,256,007 through reduction of paper 3,125,162 through reduction of postage

Environmental Benefit 3 : Reduction of Patient Travel for Clinical Cancellation

Why

- The programme estimated 21,874 cancellations/year are made @ Wayfinder enabled trusts, on the day of a clinical procedure because the patient is not ready to proceed.
- From an environmental perspective, this constitutes a wasted journey to the secondary care site.
- Greener NHS have modelled 4.25 KgCO2 per journey to an appointment

Wayfinder Impact

- Questionnaires will highlight patient readiness
- The Pre-operative questionnaire will reduce the number of on the day cancellations due pre-operative assessment
- We estimate that this will avoid 1,470 clinical cancellations (or wasted journeys) / year



Environment Benefit

- 1,470 journeys reduced each year
- Reduction of Kg CO2e = **6,249**

Environmental Benefit 4 : Reduction of Phone Calls

Why

- The NHS report 79million calls /year relating to appointments
- On top of the significant resource impact of handling those calls
- There is approximately 0.1gCO2 emitted per minute on a telephone call

Wayfinder Impact

- By digitising appointments, Wayfinder will reduce the need to contact the GP in relation to secondary care appointments
- This will enable a **reduction of 152,473,649 minutes** on the telephone /year



Environment Benefit

- On top of the unquantifiable benefit of resource efficiency
- Total Kg CO2e saved: **15,247**

Wayfinder: Key Takeaway's



9,402

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tCO₂e
Reduced



8,633

The infographic consists of a white circle with a thick green border at the bottom. The number 8,633 is centered inside the circle.

tCO₂e
Not Wasted



152M

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Minutes saved on
the phone!

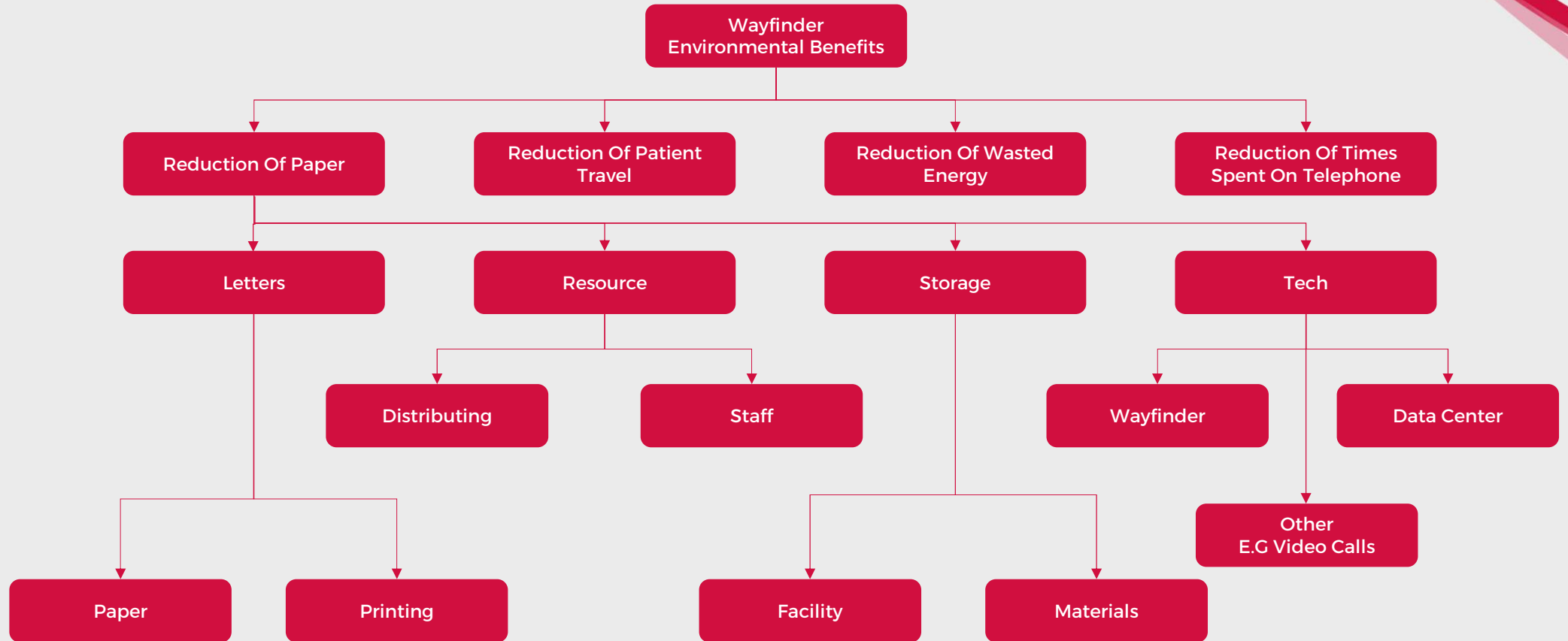


63M

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Less A4 Sheets

Environmental Benefits: A deeper dive



The Environmental Study with Greener NHS

Win Win Win

Trusts

Deeper understanding of benefits from paper/letter reducing initiatives

A methodology / questionnaire for future studies

Consistent communication/messaging

Greener NHS

CO2e factor for paper and letters

Wayfinder

Deeper understanding of the full benefit realised from WF functionality

Additional Benefits

Trusts

Help understand how environmental benefits and impacts are calculated

Connection to a wider service/community

Greener NHS

Help Greener NHS with their wider objectives

Wayfinder

Influence the road map and priorities

And>>>

Helping the planet!

Through collaboration - further benefits realised

Some of the lessons learned

- Get the ball rolling!
(don't let perfect be the enemy of good)
- Collaborate / Join forces on problems - we can all relate to Environmental Benefit
- Sustainable / Efficient Tech = Greener Tech
- Share good news - build momentum
- Don't shy away from the impacts
- No one has all the answers



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