

Environmental Sustainability in Transplantation

M Welberry Smith

April 2025

Outline

- The NHS and the climate emergency
- The ESIT group
  - What are we going to do about it? ***- in transplant services***
- Partnerships
  - ESOT
  - LD Network
  - Multi-agency Green Transplantation Taskforce
- Getting involved in ESIT
  - …and things any individual can do!

The NHS and climate change

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- NHS is the first health system to embed net zero into legislation (Health and Care Act 2022)
- Duty on all NHS organisations to contribute towards reaching environmental targets
- For emissions directly controlled by the NHS:
  - Net zero by 2040
  - 80% reduction by 2028-32
- For emissions the NHS can influence
  - Net zero by 2045
  - 80% reduction by 2036-39

The climate emergency – time to act

- “Any further delay in concerted global action will miss a brief and rapidly closing window to secure a liveable future”
  - IPCC, 2022

- “(It is)…too late to tackle climate change incrementally, it now requires transformational change”
  - Inst & Fac of Actuaries, Sept 2023

- **Economic impact**
  - **There is a built in unavoidable global economic loss of $38trillion/year**
  - **19% world economic reduction over 26 years**
  - **Kotz et al, Nature Communications, April 2024**

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ESIT

Part of the Organ and Tissue Donation and Transplantation (OTDT) directorate within NHS Blood and Transplant

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Core team

- Chair: Matt Welberry Smith
- Co-chair: John O'Callaghan
- Rosa Montero
- Carrie Scuffell
- Laura Barton

Wider group

- Transplant Medicine
- Transplant Surgery
- Transplant Coordinators
- OTDT leadership
- British Transplant Society
- NHSBT Statistics
- NHSBT Sustainability Dept
- Centre for Sustainable Healthcare

NHSBT/OTDT: ESIT working group






Part of the OTDT Clinical Team within NHSBT

ES/Green Champions Network launched April 2025

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What are we going to do about it?

….in UK transplant services

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Vision

- ***Enabling an environmentally sustainable future for transplant services in the UK***

Mission

- ***Providing the UK transplant community with the data, strategies and tools needed to improve environmental sustainability in the delivery of transplant services***



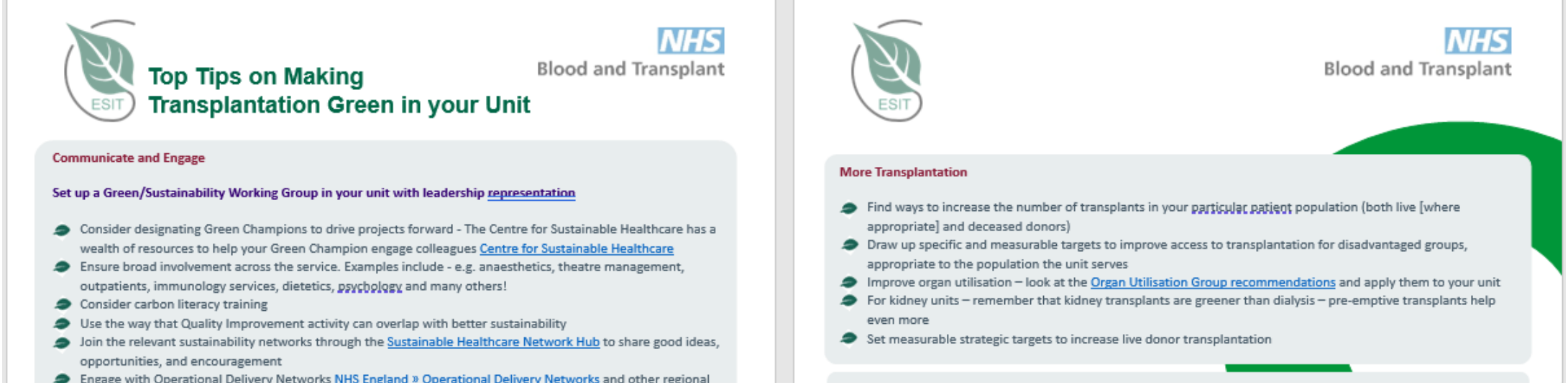
Raise awareness and increase engagement to improve understanding and knowledge in relation to environmental sustainability



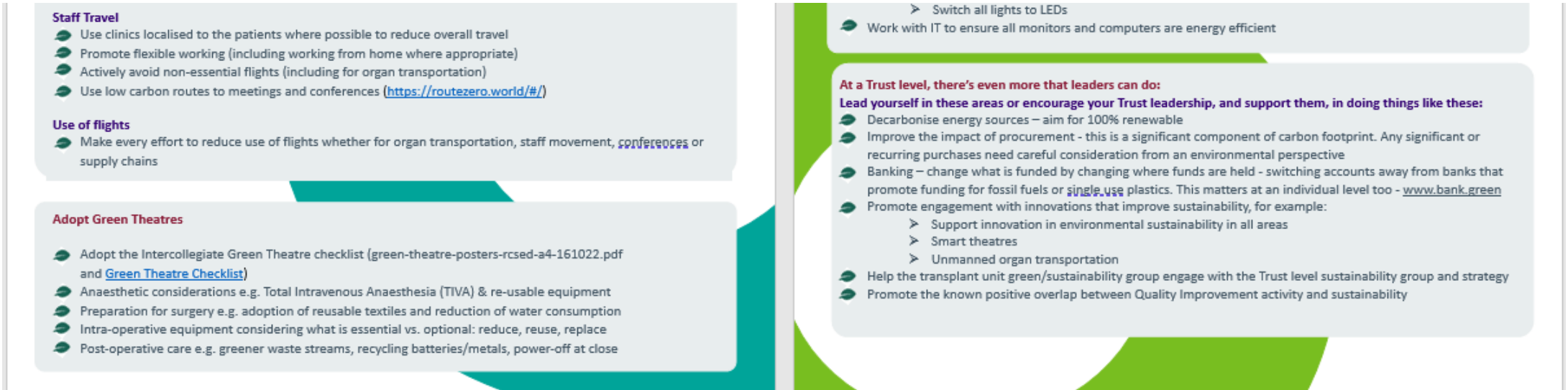
Influence long-lasting positive change and making change accessible through the development of toolkits, metrics and other resources.



Collaborate with partners to maximise opportunities for improvement and drive innovation



https://nhsbtdbe.blob.core.windows.net/umbraco-assets-corp/33713/top-tips-on-making-transplantation-green-in-your-unit.pdf



What are we going to do about it?

….in UK transplant services

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1) Raise awareness and increase engagement around ES in transplant services
    a. **Grow the ESIT network** of environmental champions equipped to promote change
    b. **Educate transplant professionals** at all levels, and share best practise
    c. **Represent ESIT** in national and international forums
    d. **Develop tools** for professionals, Trusts and services to use in ES in transplantation



Raise awareness and increase engagement to improve understanding and knowledge in relation to environmental sustainability

What are we going to do about it?

….in UK transplant services

2) Influence long lasting positive change
   a. **Review clinical pathways** to identify opportunities for change
   b. **Develop dashboard metrics** for use by transplant units
   c. **Develop and embed ES aspects in OTDT/NHSBT centre activity reporting**



Influence long-lasting positive change and making change accessible through the development of toolkits, metrics and other resources.

What are we going to do about it?

….in UK transplant services

3) Collaborate with partners
    a. Set up a **multi-agency collaboration** on ES in transplantation - including (but not limited to): professional (BTS, LDN), sustainability (CSH), and industry partners
    b. Leverage funding for activities in all strategic arms
    c. Source educational opportunities in ES for ESIT members
    d. Provide consultative support both internally (NHSBT) and externally where appropriate



Collaborate with partners to maximise opportunities for improvement and drive innovation

Collaboration with ESOT

ESIT x ESOT

Environmental Sustainability in Transplantation

The ESOT Action Day 2025 is proud to announce:

“A bold step forward on a shared, sustainable and equitable transplantation journey”

We are thrilled to share a transformative milestone in our mission to advance transplantation across Europe and beyond. Through a new and powerful partnership, ESOT and NHS Blood and Transplant's Environmental Sustainability in Transplantation (ESIT) network are setting the stage for lasting impact - starting at the ESOT Congress 2025.

This collaboration isn’t just symbolic. It’s a hands-on journey focused on:

- Making transplantation more sustainable
- Tackling sustainability-related inequalities in organ donation, retrieval, and transplantation
- Developing meaningful, transplant community-driven initiatives
- Creating a model of supportive links for environmental sustainability - including international collaborations

Join us on this transformative journey. We will be sharing weekly updates to keep you inspired and informed, each step paving the way toward a better tomorrow in transplantation.

Toolkit To Assess Your Living Kidney Donor Pathway

CENTRE for SUSTAINABLE HEALTHCARE · UKKA UK Kidney Association · The Health Foundation · NHS Blood and Transplant

Contents

Introduction 3

Example Case Study 5

Toolkit 8

1 Engaging Stakeholders and Forming Your Team *Page 10*

2 Involving People with Lived Experience *Page 12*

3 How to Map your Pathway and Resource Use *Step by Step Guidance* *Page 15*

4 Understanding your donor population guidance *Page 17*

Optimising your pathway 19
potential high impact changes

Case Study Template 23

References 23

Example Case Study

Bradford LKD service undertook a review of their LKD assessment pathway and resource use.

Before



The pathway maps appointments and key decision points from initial contact up to and including the pre-operative appointment. A 'typical pathway' is depicted, excluding variations for a small proportion of donors who require additional investigations

All activities were recorded per contact and their environmental impact calculated across travel, tests, diagnostics, sample transport and utilities. Data was converted into GHG emissions. A 'typical' pathway produced **112.9kgCO2e**, with donor travel making up **54%**

12
Appointments

CO_2e

The carbon footprint of a 'typical' LKD assessment pathway per donor was

112.9 kgCO_2e

Average distance travelled

243 miles

Current key workstreams

- Network of Green Champions in Transplantation
  - Training in carbon literacy (free!)
  - Mutual support
  - National SusQI project

- Partnerships / collaborations
  - ESOT collaboration for Congress in London 2025
  - LD Network
  - Multi-agency taskforce

- Clinical pathways analysis
  - Across all organs and donation/retrieval processes through to long term care

- Dashboard creation

- Move to embed sustainability metrics in NHSBT reporting

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ESOT Congress

Toolkit To Assess Your Living Kidney Donor Pathway

CENTRE for SUSTAINABLE HEALTHCARE

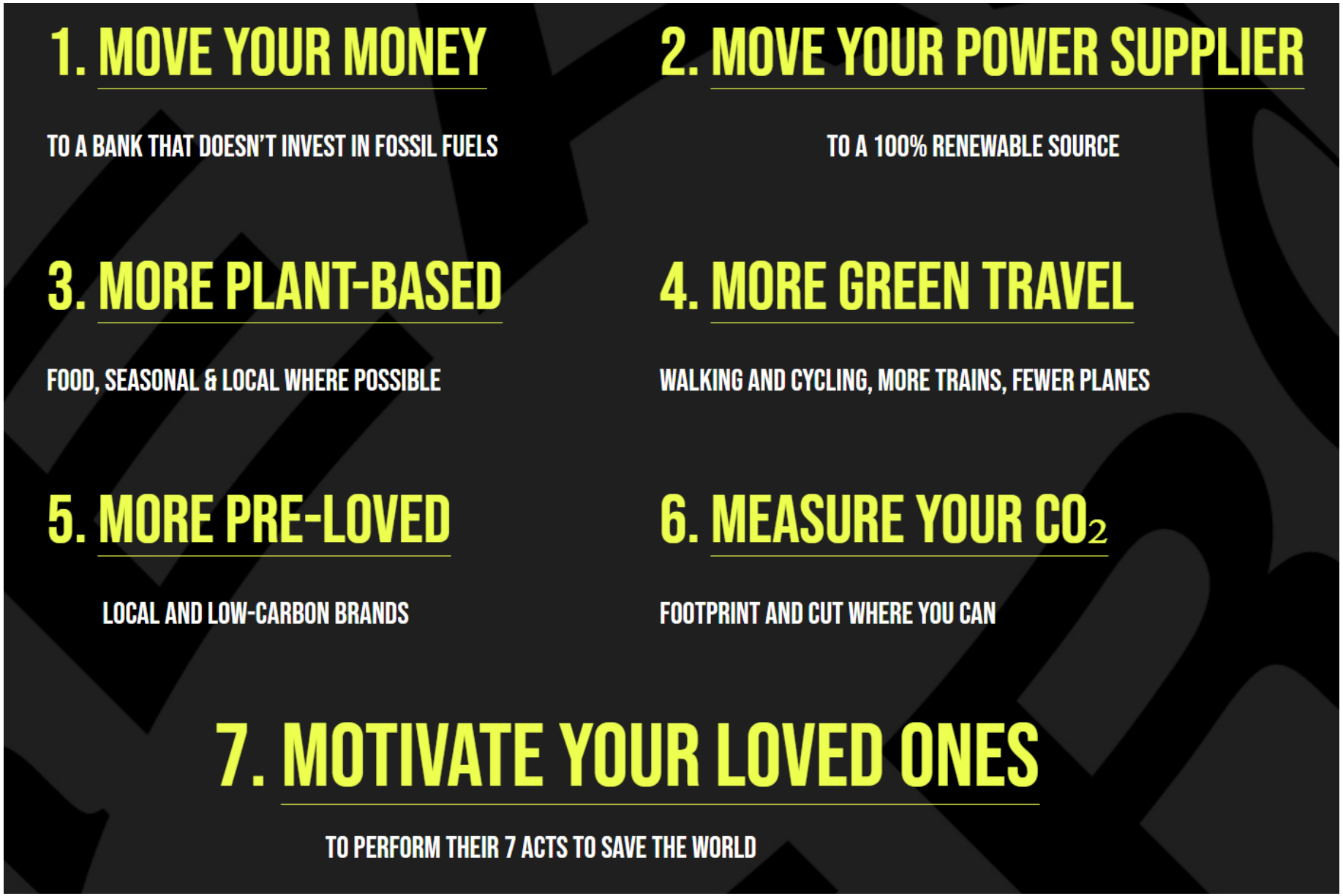
inspire • empower • transform

What can I do?! I'm just one person!

- Individually
  - 7 acts to change the world: 7 Acts — Real Zero
- Departmentally
  - Ensure or lobby for a standing agenda item on Environmental Sustainability ***at every meeting you attend in the NHS***
  - Appoint an ES champion
  - Decarbonise clinical pathways
  - The drive to more pre-emptive live donor kidney transplants is ***environmentally sound***
- Politically/nationally
  - Policy change at regional and national levels is essential
  - Make sure our policymakers know what is needed

7 acts to change the world - RealZero

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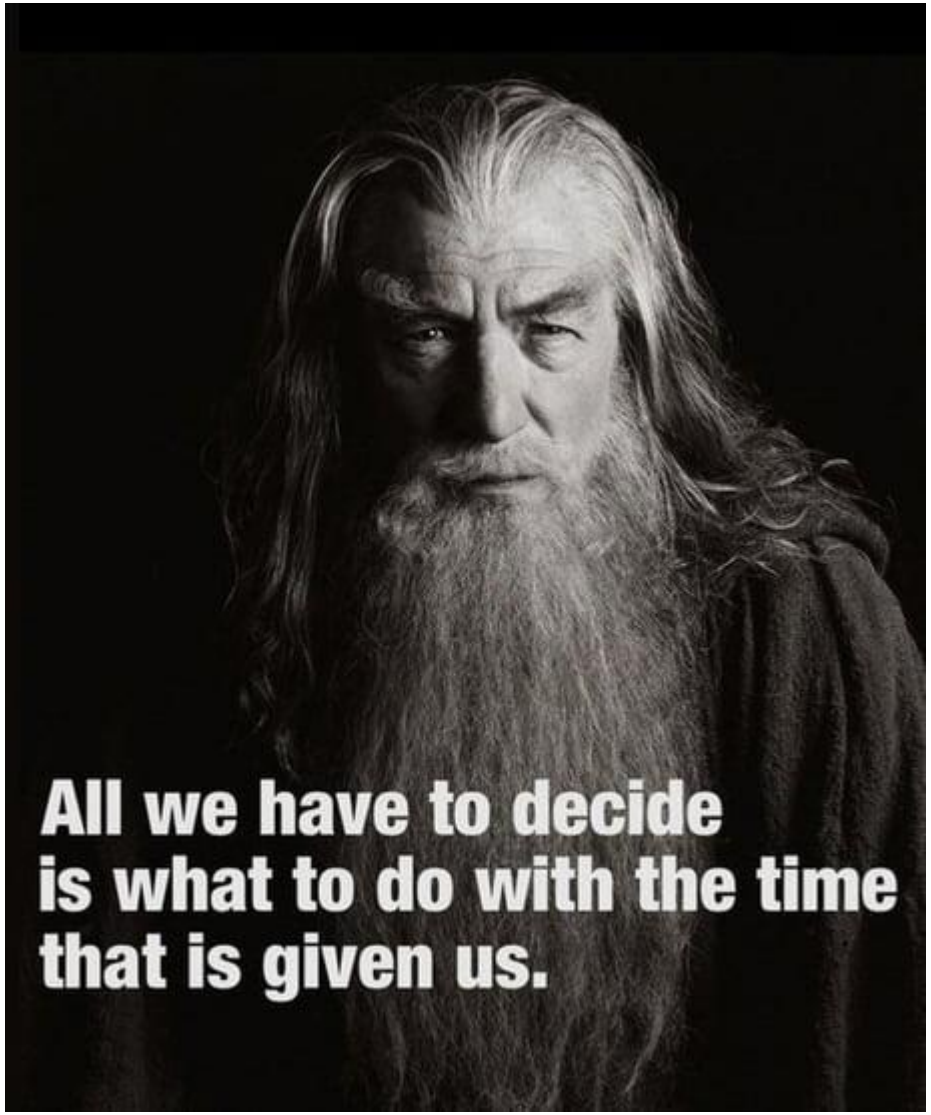


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"The greatest threat to our planet
is the belief that someone else will save it."
Robert Swan, explorer/environmental activist

The future will either be green or not at all



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