Smart + Green Ports

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1 — Atmo Introduction — What we do, our team

2 — Technology — AtmoCore

3 — Smart Ports — Asset Optimisation

4 — Safety — Minimising air, noise & machinery risks

5 — Green Ports — Decarbonisation

1. Introduction

- What we do, Our team

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Team

Guy Barkley
Founder & CEO

Madeleine Muir
COO

Sharon Heideman
Head of Compliance

Kieran Rafferty
Senior Account Director

Carla Pires
CRM

Aravind Tumuluri
Solutions Architect

Cristiana Veloso
Commercial & Data

Patrick Thomas
Product Development

James Dyer
Data Science

Tobi Taiwo
Site Ops and Product Dev

Fynn O'Connor
Data and Product Dev

Joe Johnson
Product Dev Placement

Craig Hammock
Data Science

Chloe Groff
Product Dev Placement

Environment

Visualise in real time

AtmoCore™
Live asset & environmental insights, all in one place.

Atmo specialises in using many different types of sensors and real-time data transmissions, providing KPIs to support efficiently run sites and to ensure a safe working environment.

Emissions
Reduce emissions by identifying root causes. Support permit and compliance requirements.

Staff safety
Minimise exposure and support EH40 & noise compliance = fewer sick days and a more productive workforce.

Decarbonisation
Rank on-site assets by emissions and determine the optimal decarbonisation strategy per £ invested.

Assets

Optimise sites and fleets

Atmo identifies asset efficiencies which helps companies to effectively use their existing assets and advising any asset changes to increase your site's return on investment whilst controlling air quality.

Site & fleet
Track your assets in real time. Understand when, where and how assets are used

Efficiency
Identify under-utilised assets; reduce downtime. Optimise journeys & routing.

Maintenance
Enable predictive maintenance and highlight unreliable assets

Data

All in one place

Atmo measures site activity and pollution to rank on-site assets by real-world emission levels, and highlight risks to staff and the environment.

Integrate
Save time and remove data silos, with existing and new datasets all in Atmocore.

Scale
From macro performance across a portfolio of sites and multiple fleets, to individual

Visual & Intuitive
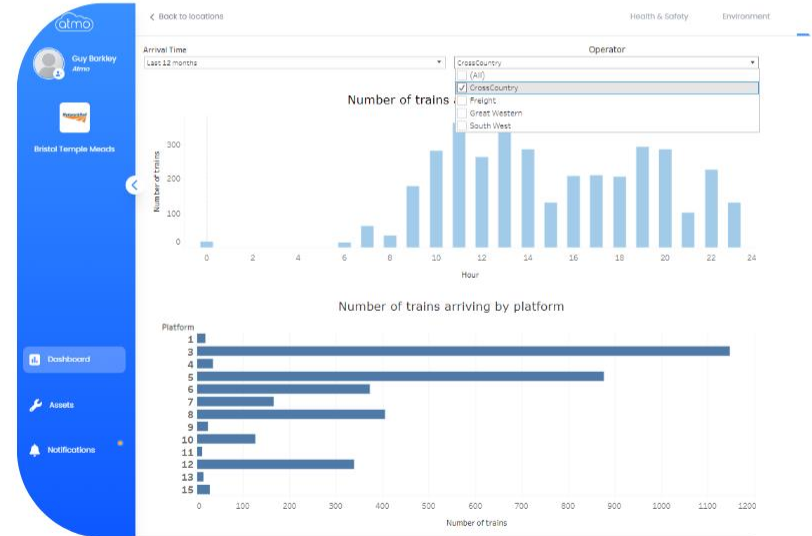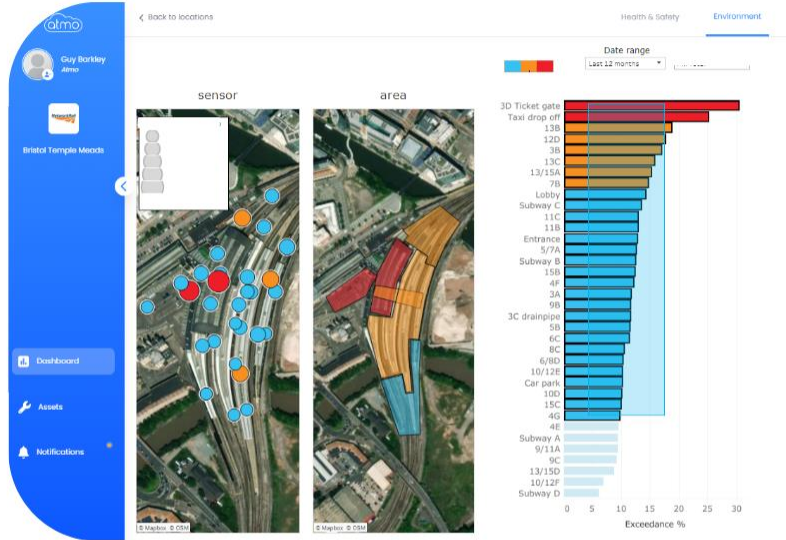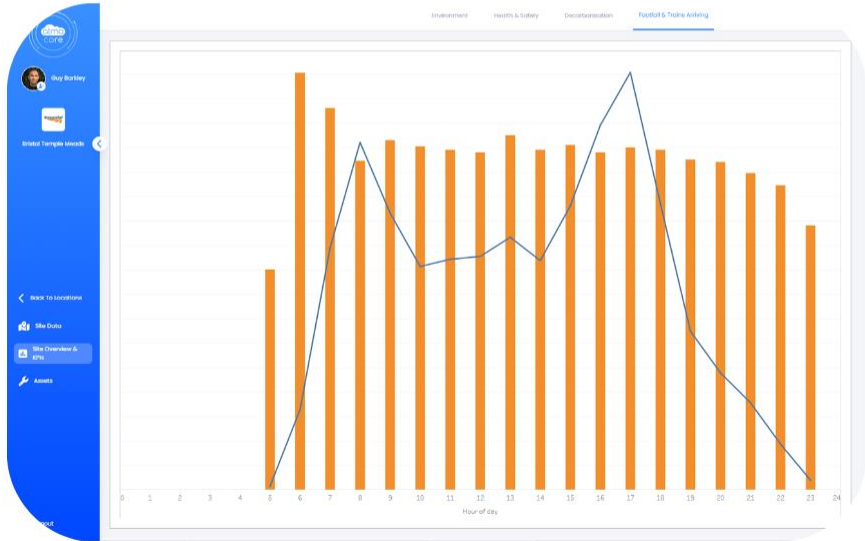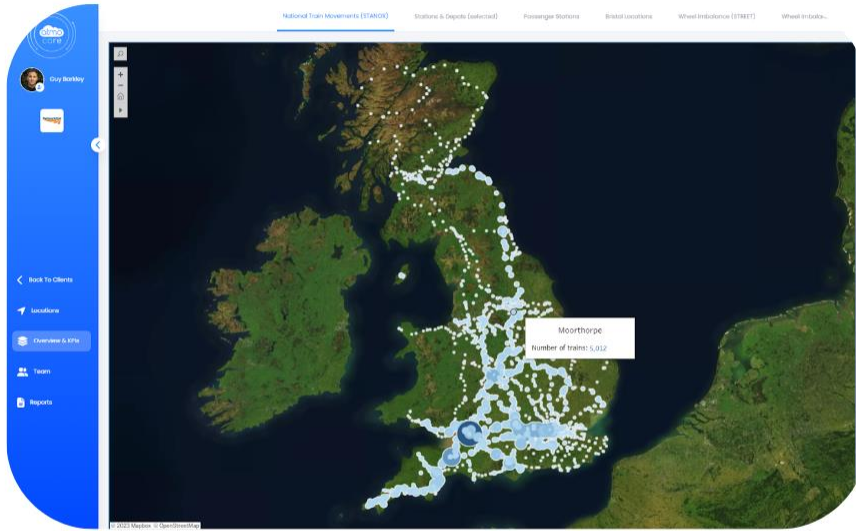Easy to digest information, track KPIs and implement change

- Digital twins of site, AtmoCore

Data Analysis

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Software

Existing Data Sources

New Data Sources

Our data agnostic platform supports IoT sensors, APIs & manual upload

Cloud Platform

Carbon neutral & secure cloud, with 99% uptime.

Machine Learning & Algorithms

Automated processes provide real time insights

Data Scientists

Analysis and insight from our team of specialist data scientists

AtmoCore

All of your data In one place

atmo core

KPIs

Data Digests

Live notifications

3. Asset Optimisation

- Smart Ports

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Assets - TOC Train Depot

Assets:

Active time — Inactive time

- Forklift 1
- Forklift 2
- Shunter

Systems:

☀ Day-time
🌙 Night-time

↱ % ☀   ↱ % 🌙

- Extraction   ← %
- Ventilation

↱ % ☀   ↱ % 🌙

← %

Active time — Inactive time

ABTO & Porto de Lisboa

Hinkley C

Low frequency — High frequency

Low frequency — High frequency
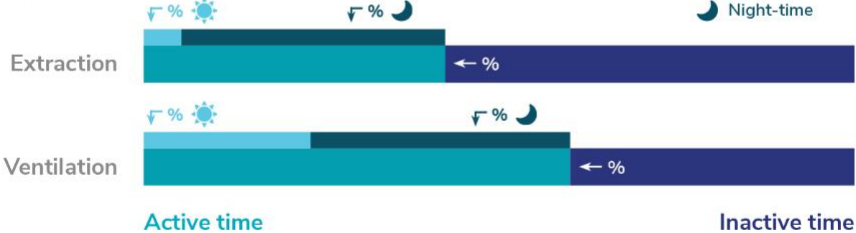
Identified

£7 FIG

SAVINGS

through efficient use of **on-site assets**

Efficiency Increase

20%

on **dust suppression systems**

Smart Depots

NetworkRail

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Scope

Machinery
(Cranes, plant etc.)

Energy Data

Enviro + Safety

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4. Safety

-    Air, noise & separating people & machinery

Assets & Air Quality

PM2.5 hotspots — High value / Low value

GPS activity areas — High frequency / Low frequency

37
66
55
22
27
20
21

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Noise

Peak noise levels

Core   Non-core

Daily peak levels:

Precast Office	A-weighted 77.5 dB	80.8 dB
Recreation Area	A-weighted 70.0 dB	72.9 dB
Precast Office	C-weighted 86.6 dB	93.7 dB
Recreation Area	C-weighted 81.5 dB	82.1 dB

40 dB
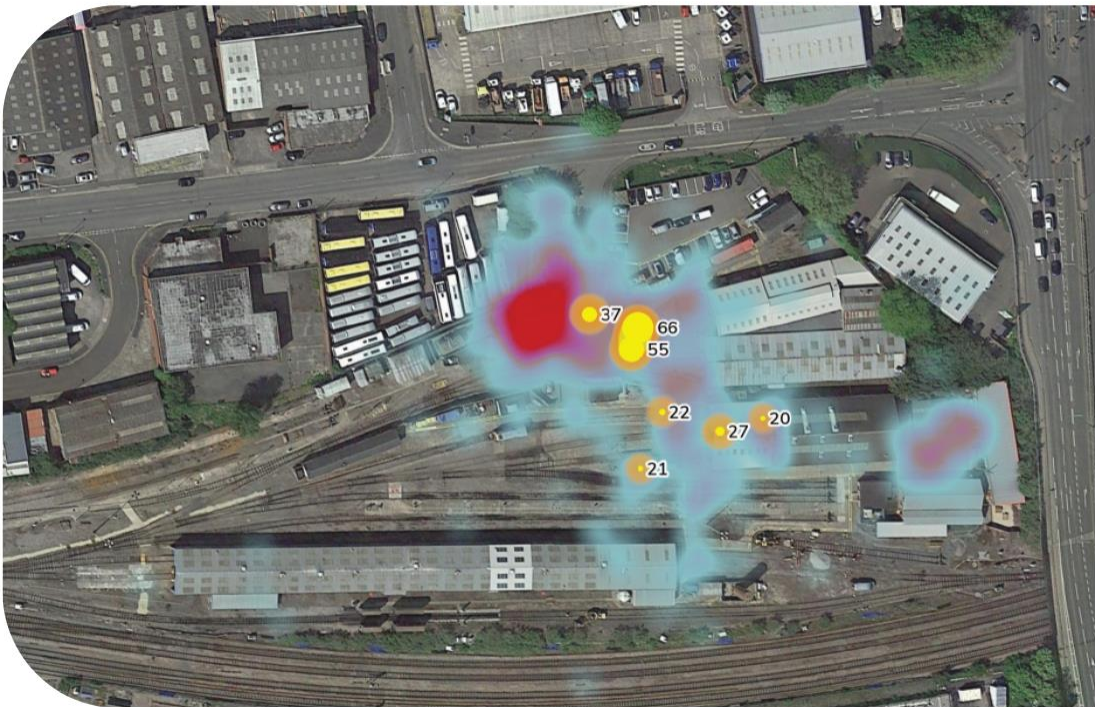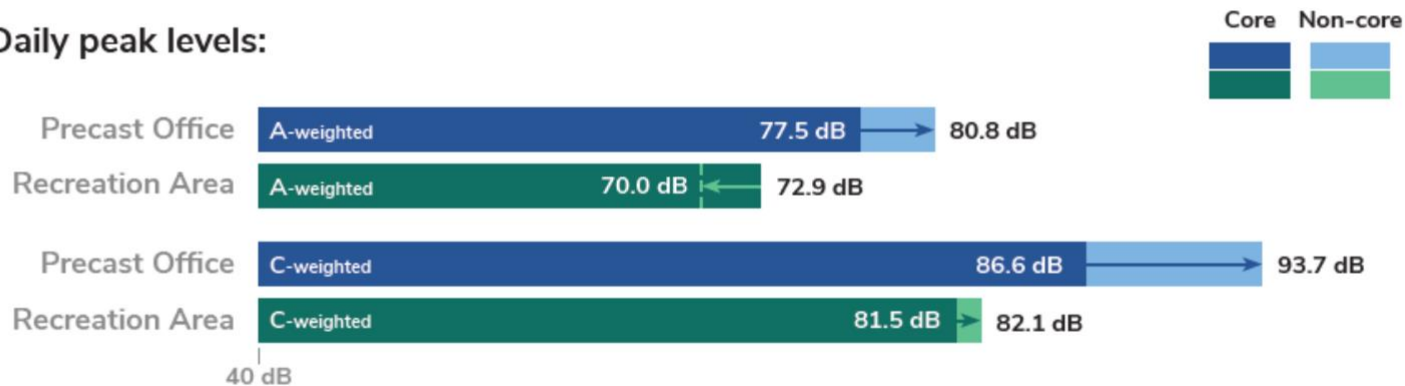
5. Decarbonisation

Green Ports, AtmoCore

Bristol Port - Decarbonisation

Graham-Robertson

Malago
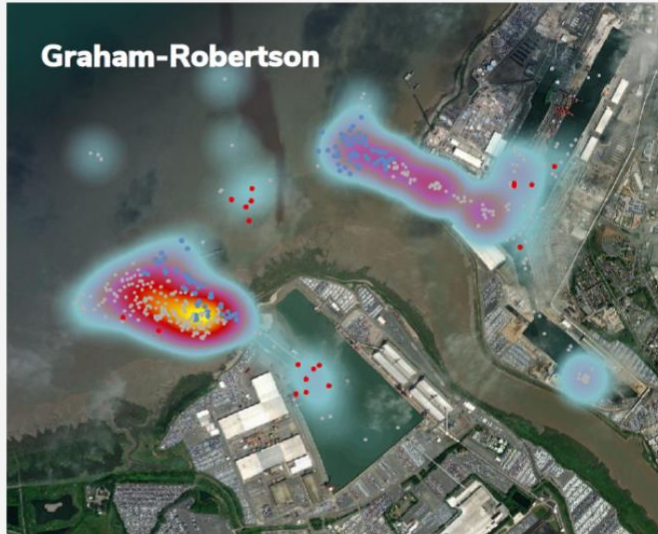
Dredging Vessel Location Density

Low frequency — High frequency

PM2.5 Exceedance Probability

Lower likelihood of high PM level → Higher likelihood of high PM level
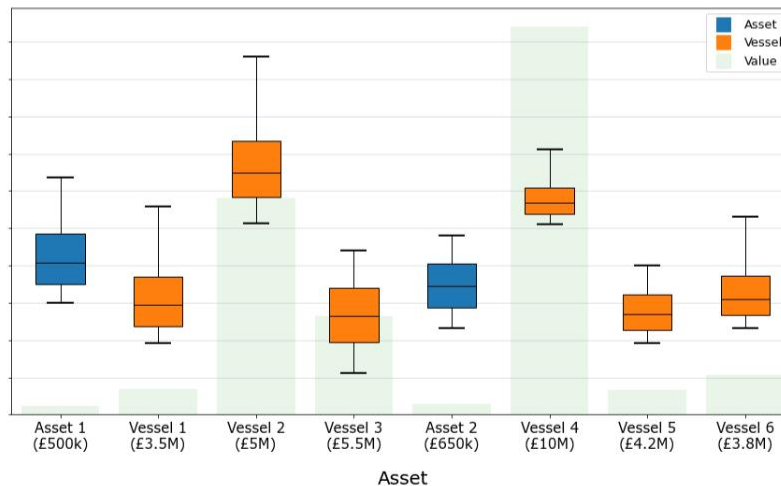
Decarbonisation

Identify Low Hanging Fruit

- Compare real-world emissions
- Rank assets on-site
- BEFORE spending big money

Q&A, Obrigado!

Thank You

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Maximise efficiency
Reduce emissions
Save lives