Carbon Management Planning Data – Insight - Action



ASSURED ASSURED PERFORMANCE ANALYTICS

ASSURED

Overview of Carbon Credentials

Who Are We?





Values Integrity Curiosity Excellence







Location





Why do we exist?

"To enable sustainable business in a global low-carbon economy."

What do we do?

"We optimise energy performance in buildings. We reduce carbon compliance and reporting risks."



How do we do it - Core Disciplines



Powered by our Assured Data Analytics Platform ADAPt



Carbon Management Roadmap

Carbon Credentials' Carbon Management Roadmap



Getting Value From Your Data

The Data Challenge: Highest priority sustainability objectives for next year



What are we trying to achieve with sustainability data?

- **1. Accuracy** Reporting with confidence
- **2. Transparency** Confidently demonstrating performance
- **3.** Insight Understanding performance
- **4.** Action Driving performance

1. Accuracy

Reporting with confidence



Accuracy: Multiple Inputs and Outputs, but One Version of the Truth!





What are your challenges around data accuracy?



2. Transparency

Confidently demonstrating performance



Transparency: Confidently Demonstrating Performance



Case Study: University of the West of England, Bristol

Improving the accuracy and confidence in emissions reporting

Key Challenges

- Lack of confidence in approach to quantifying and reporting carbon emissions and progress against targets
- Unsure of ability to achieve publicly stated carbon reduction targets

Project Objectives

- Define a GHG Emissions Quantification and Reporting methodology, applying best practice accounting principles from DEFRA and the GHG Protocol
- Assess UWE's carbon trajectory to 2020 by modelling the impact of expected projects and changes to the estate, and confirm the likelihood of achieving publically stated targets



Case Study: University of the West of England, Bristol

Improving the accuracy and confidence in emissions reporting



Identified 85% of projects to reach 2020/21 target

Without forecasted growth, identified **105%** of projects to reach 2020/21 target

What is stopping you from being more transparent when reporting carbon performance?



Understanding performance

3. Insight



Insight: Understanding Performance



dh Å Pi # . \mathbf{T} ial Mai **Business Air** Electricity Natural Gas Fleet Fuel Water Waste 2014/15 62,625 tCO2e 145,359 tCO2e 394,353 tCO2e 32,000 tonnes 90,298 tCO2e 1.4 million m3 2014-15 10 year -12,733 m3 78% diverted from -20.298 tCO2e -15.198 tCO2e -26.747 tCO2e -61.911 tCO2e **CARBON FOOTPRINT** -1% landfill+7% savings (since 2013-14) (since 2013-14) 10 YEAR SAVINGS FROM 2004-05 CARBON 732,900 tCO2e SCOPE 1 487,500 tCOre **Direct Emissions** Å SCOPE 2 145,400 tCO.e **Electricity Indirect Emissions** Electricity ed approx 30,000 light bulbs with LEDs at 16 Mail Centres Waste SCOPE 3 100.000 tCO 1.2 million Other Indirect Emissions sized parcels diverted from landfill Recycling 956 Water £300,000 per year potential water savings identified at the top 50 water-consuming sites

Engaging simplicity



Technical detail

Case Study: London South Bank University

Monthly Portfolio Overview



Total invoiced electricity and gas consumption from 01st August 2010 - 31st December 2015.



Comparison of monthly consumption data over 4 financial years

Case Study: London South Bank University

Monthly Building Reports





Case Study: London South Bank University

Quarterly Report



Campus

LEU (Lonon South Benk University) is demonstrating effective reductions in electricity and natural gas consumption. Across campas buildings there has been consistent reduction in conscurving quarters maning exception programs. The importy of data solitican at the university is taken from hard hourly meters and AMR (Automatic Neter Read), which provides timely and accurate consumption data. CCES recommends undertaking degree day analysis on Natural data companyion to understand how the buildings are reporting to external temperature change.

Halls

Excitent progress has been achieved in reducing electricity and natural gas consumption. 8.8% reduction in electricity and 24.7% reduction natural gas in university halls demonstrates successful engagement with energy reduction initiatives. CCES recommends undertaking occupancy analysis on Mais consumption to understande energy initianity per student.

Water

Water consumption has been omitted from this report due to incomplete data. Water meter readings are recorded sponsdically and data provided frequently includes gaps. In order to combat this CCES recommends undertaking a feasibility study on the instaladion of Water MARs, in order to provide accurate and timely consumption stat. A bismular levent will be used comprising water consumption to provide visibility in the interim.



This KPI has been developed to communicate Carbon Intensity through size and colour. The larger the bubble the higher the carbon intensity of the building, similarly the colour relates to the legend.

Quarterly carbon intensity has decreased compared to the corresponding guarter in financial year 2014.

Caston house and 119 London Road have been excluded due to missing data from when British Gas replaced meters with Smart meters. They will be included in the next quarterly report when this data has been sourced.

4. Action

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Driving performance

Action: Driving Performance



ASSURED DATA ANALYTICS PLATFORM

Case Study: Driving Performance at Village Hotels

- Reduced Energy Costs, Consumption and Carbon
- Improved Comfort Conditions & Customer Experience
- Daily Proactive Performance Maintenance
- Reduced Maintenance and Asset Costs
- Get Maximum Value from your FM/BMS Maintenance Contract





ESOS Opportunity Assessment estimate of BMS optimisation	£15,100
Forecast of savings prior to implementation	£17,200
Forecast of savings based on data so far	£20,000+

11% saving

Forecasted annual savings: >£20,000



Discussion

What is preventing you from obtaining insight and driving action from your carbon data?



Thank you

Questions?



