



The Environmental Management Dashboard – Footprint Tracker™

A Corporate Social Responsibility (CSR) Management Tool

Monitor and reduce your carbon emissions and energy bills

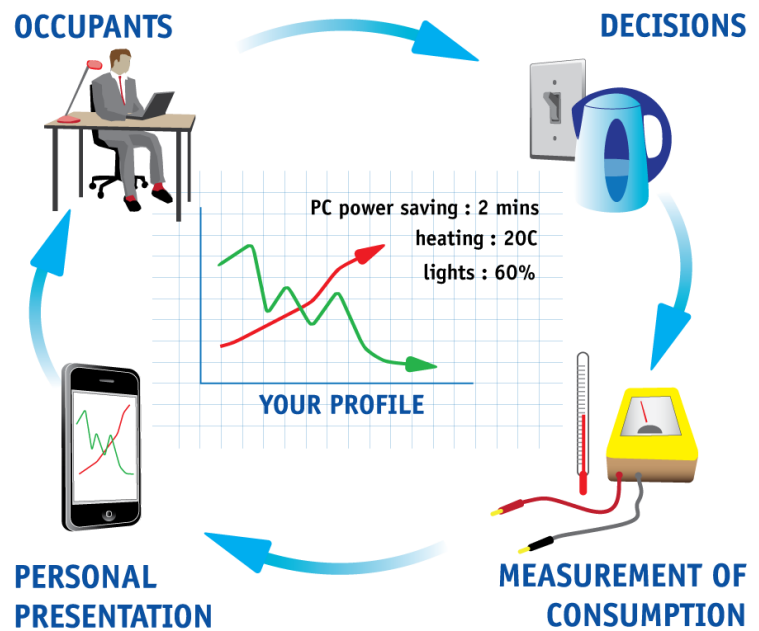
- The only real time emissions and consumption benchmarking tool available
- Geographical presentation of property estate and building performance against benchmark
- Calculation of trends to identify problems
- Reporting and Alerting
- Integrated control functions for energy savings
- Combines cutting edge communications and environmental technologies
- High visibility and intuitive 'management dashboard' model allows organisations to clearly demonstrate their commitment to reducing carbon emissions and environmental load and to understand their energy consumption patterns
- Application can be personalised so individual employees can monitor their own workplace footprint

Building Sustainability's Environmental Management Dashboard System (The Footprint Tracker) provides a flexible means to visualise the total environmental load with special focus on energy consumption, energy savings, and energy generation for people, assets, buildings, and complete property portfolios. By measuring and presenting the actual cost of energy, energy consumption and CO₂ emissions (The Carbon Footprint), occupants, building managers and building designers are made more aware of energy usage and are incentivised to introduce energy efficient solutions.

A key principle for lowering energy consumption in office buildings is to manage both building utilisation and energy together as one system. If the building is empty, for example, the building systems can be controlled to put

the building into a state of hibernation. Buildings with flexible work-settings can be managed to concentrate occupants together and maximise the percentage of "hibernating" floors and assets.

"You cannot manage what you cannot measure"





The Carbon Dashboard can display:

- Real time consumption of energy and water (by total estate, single building, zone or individual) as meters and icons
- Hourly, daily, or monthly consumption and trends as diagrams
- Energy saved, against a benchmark, presented as cost and carbon averted
- Mix of carbon producing energy, and remote or locally produced renewable energy
- Individual carbon footprint (the software can link to personal active RFID tags which will provide precise details on where people are in the building)

The Dashboard System Features:

Collects, processes and displays real time and historical data regarding the environmental load (energy, water, status) from building management systems (BMS), device controllers, meters and administrative systems

Appearance and functions of the displays (the Dashboards) can be designed for the specific needs of the user company

Calculates trends and generates alerts to energy and property managers

Stores historical data and provides reports on demand

Optional functions control HVAC (Heating Ventilation Air Conditioning) and Lighting, Information Technology and other building assets, based on time schedules, personal profiles, the usage of available resources and a people location system

Normally collects data over an Internet connection

Contains an Asset Register and functions for RFID tracking of assets

Based on a Content Management Platform that can also be used for scheduling and distribution of information (Dashboards with content such as energy and resource usage and device status) via the Internet to Digital Signage screens

Can be configured as an Internet service (On Demand) or licensed to large users (Software license)

The Dashboard System Modules

The Environmental Management System and the Footprint Tracker can be used for single buildings or complete portfolios, with practically unlimited scalability. The system consists of a software suite with the following main modules:

1	Google Maps based property portfolio Portal (enabling world-wide building search and find function)
2	Modules for collection of data from Building Management Systems, device controllers, meters, and administrative, security and access systems
3	Modules for direct collection of data from renewable energy sources (photo voltaic systems, solar thermal systems, wind turbines, bio-mass boilers, etc.)
4	Calculation of cost and carbon equivalents, summaries, averages and comparisons etc.
5	Management and Personal Dashboards to present buildings and devices information as collected and processed
6	A personal profiles and preferences database / register (e.g. room temperature and lighting level)
7	Interface modules to collect information from co-operating systems such as Location Systems and Resource Scheduler Systems
8	Modules for the control of HVAC, lighting, computers, networks, other assets, devices and appliances
9	Database for storage of collected and historical data
10	Report Generator
11	Asset Register (used to store information about assets that is then accessible via the dashboard / RFID functionality)
12	Content Management Module

