

MEASURING THE IMPACT OF

Occupant Behavior

ON

Building Performance

ATTRIBUTIONS

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+ Behavior

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METRICS GROUP GOALS

CLIMATE, BUILDINGS & BEHAVIOR

Determine metrics to use when measuring the influence of occupant behavior on building performance

Determine whether people know how to collect data

Gather, analyze and display data

ENERGY

kWh / SF

kWh / FTE

Therms / SF

Therms / FTE

WATER

Gallons / SF

Gallons / FTE

DATA COLLECTION

Energy and water utility bills

Energy and water metered data

- Whole building/space

- Submeters

Occupant surveys

- Web hosted questionnaires (e.g., Zoomerang)

- Desktop queries (e.g., VGIQ pilot)

DATA COLLECTION **CHALLENGES**

Dedicated party for data collection and continuity

Dedicated party for delivering behavior intervention

Access to meters and data reporting

Access to individual unit data in multi-family and multi-tenant buildings

Tools for **MEASUREMENT**

EPA's Portfolio Manager

Earth Aid

EIS/Dashboards/Meters with web based data transfer capability

Devices that measure energy consumption data at plug level

Control devices and transmit data via radio frequency
(geofencing)

Tools for **COMPETITION**

Maps: Less-en and GBIG

Social Network: Online forums and gaming structures

Boston Children's Museum

Boston Children's Museum
 318 Congress Street
 Boston, MA 2110
 US

LEED Status



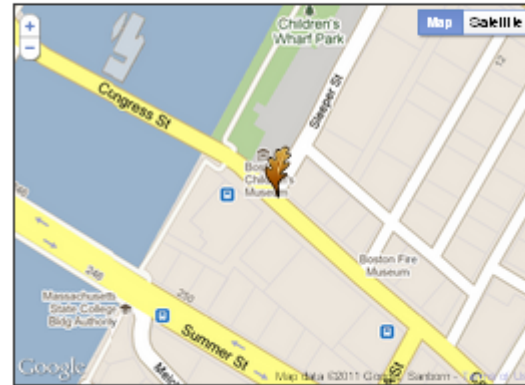
LEED NC 2.1 Gold certified.
 39 of 69 possible points.
 Awarded March 03, 2008

Credit Achievement

Sustainable Sites	9/14
Water Efficiency	2/5
Energy and Atmosphere	4/17
Materials and Resources	8/13
Indoor Environmental Quality	11/15
Innovation in Design	5/5
Total	39

Project Data

Owner Type: Non-Profit Org.
 Project Type: Other
 Gross Sq. Footage: 23,000
 Total Property Area: 66,340
 Case Study?: **Yes**
 Walk Score®: **88 - Very Walkable**
 Transit Score®: **98 - Rider's Paradise**



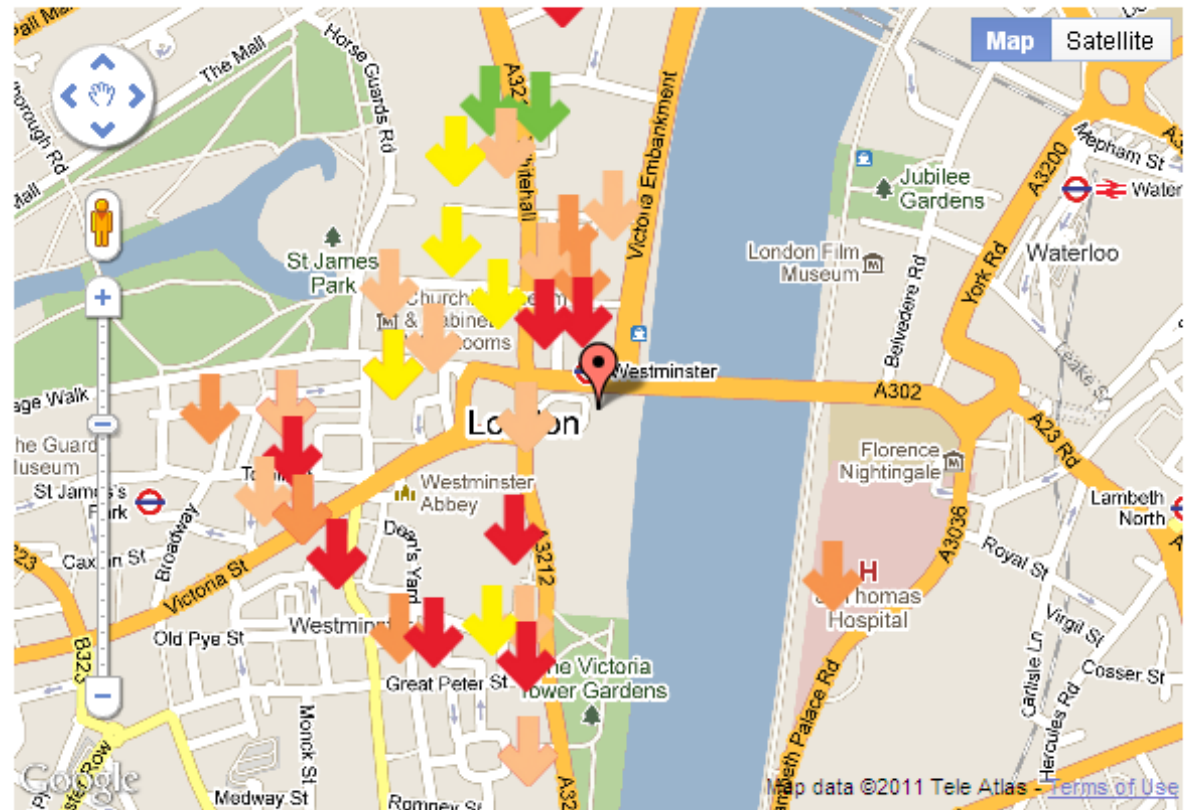
STEP 1:

We're compiling the World's first 'building energy' map to see how our workplaces are performing.

You can help by adding your workplace (if it's not there already).

Enter your building's street address:

Go Find ▶



LessEn's energy map, and [mobile app](#), combines work place energy ratings from around the world - currently we have the USA and the UK, with others to follow.

The graphic on the right illustrates how



N E X T S T E P S

METRICS WORKING GROUP

Revisit target behaviors for residential spaces

Determine target behaviors for commercial spaces

Investigate measurement devices and new technologies

Identify buildings for case studies and implement behavior change interventions

N E X T S T E P S

USGBC

Behavior change intervention and data is collected pre-intervention and post-intervention

USGBC will be initiating an intervention at HQ

Challenges of how to realize additional energy savings in a LEED Platinum space that already has so many passive energy - and water - saving technologies