BATTLE OF THE BUILDINGS
TEAM CHALLENGE
EPA's NATIONAL BUILDING COMPETITION

Educating toward whole-building efficiency

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Who are we?

Commercial building energy efficiency?

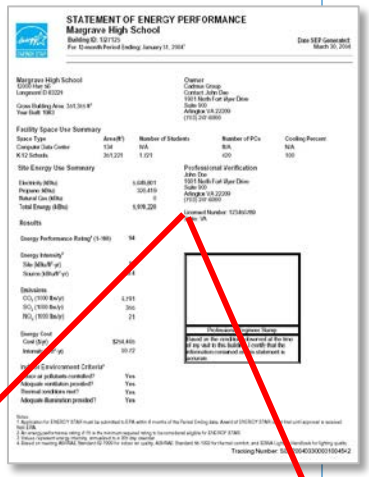
Energy performance score for buildings

Fuel Efficiency

Is 60 MPG high or low for an automobile?

Building Efficiency

Is 80 kBtu/SF/YR high or low for a building?



1-100 ENERGY STAR score
80+ metrics

EPA

The industry standard for benchmarking energy use

EPA

The problem

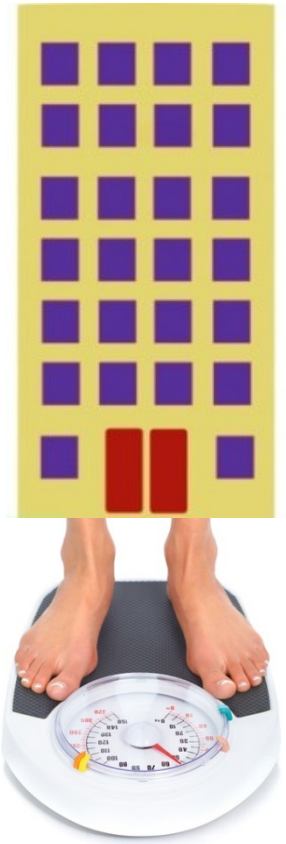
Goal

Give building owners and managers a one-stop-shop platform to educate and engage stakeholders about energy efficiency, realize savings, and promote results

The solution

Biggest Loser…for buildings

"Don't step on it . . . it makes you cry."

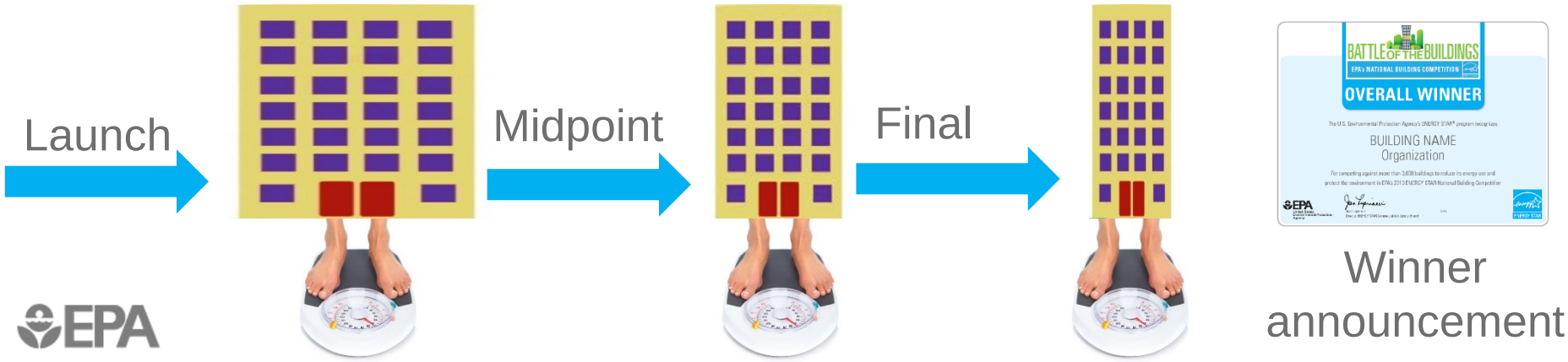


ENERGY STAR®
PortfolioManager®

EPA

The nitty gritty

- Competitors submit data via Portfolio Manager
- Winner is the building that achieves the greatest percentage reduction in energy use over the 12-month competition period
- EPA publicly posts EUI and percentage change for each competitor at start, midpoint, and competition end
- Winners must verify data to receive EPA recognition



Winner announcement

Every season has a new twist

2010

- 14 competitors
  - Saved 44 million kBtu of energy
  - Saved $950,000 on utility bills
- Winner: 36% energy savings

2011

- 245 competitors
  - Saved 240 million kBtu of energy
  - Saved $5.2 million on utility bills
- Winner: 63% energy savings

Every season has a new twist

2013

- 3,000+ competitors
  - 85+ buildings reduced energy use by 20% or more
  - Average savings of $25,000 and 8% in energy use
- Winner: 52% energy savings

2014

- 3,000+ competitors
  - 50 buildings reduced energy use by 20% or more
  - Average of $20,000 and 8% in energy use
- Winner: 46% energy savings

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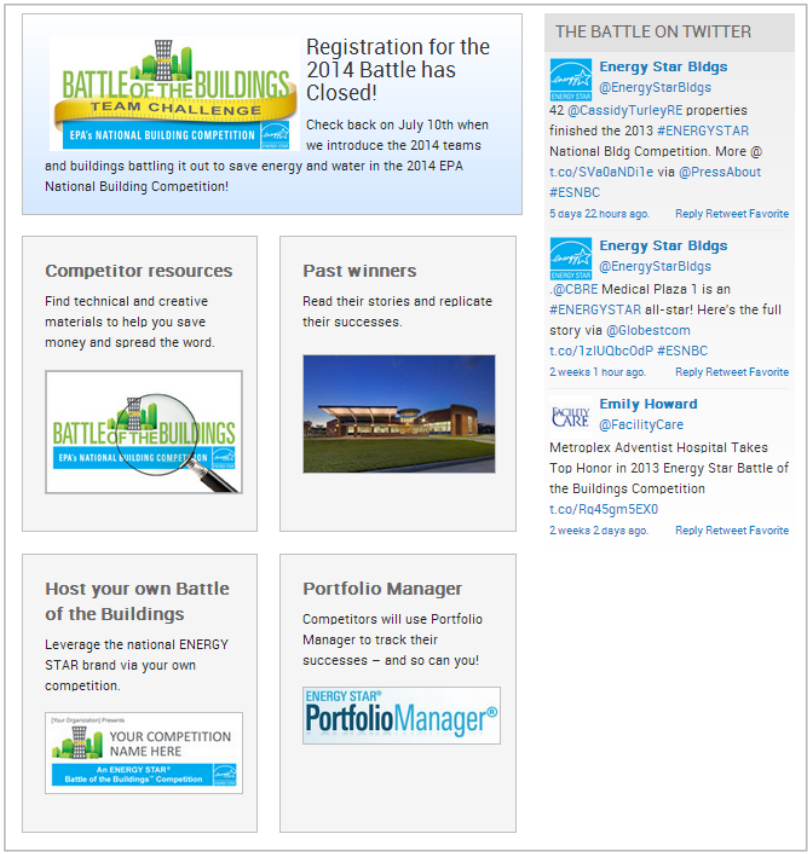
Strategies

1. Drive competition by making energy use information transparent
2. Make it easy for competitors to educate and engage stakeholders in the competition
3. Promote interaction among competitors to share lessons learned and foster innovation
4. Gather best practices and case studies
5. Recognize success

1. Drive competition by making energy use information transparent

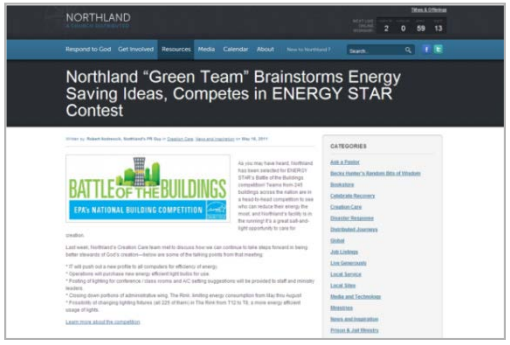
- Website with energy “weights” and current rankings

www.energystar.gov/battleofthebuildings



2. Make it easy for competitors to engage stakeholders in the competition

- Package of template communications materials
- Bring Your Green to Work



3. Promote interaction among competitors to share lessons learned and foster innovation

- Monthly webinars

- Social media hashtag #ESNBC

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4. Gather best practices and case studies

- Best practices and trends report
- Case studies of winners

STORIES BEHIND THE BATTLE

Claiborne Elementary School

East Baton Rouge Parish School System
Baton Rouge, La.

RECOGNITION:
#1 overall winner
#1 winner, Education category
20% energy use reduction

SAVINGS:
45.9% energy savings
$114,499 estimated cost savings
488 $MtCO_2e$ greenhouse gas emissions prevented

BUILDING STATS:
Type: Education
Ending EUI: 129 kBtu/Sq. Ft.

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"Start getting all stakeholders on board with the energy program from the beginning, whether they're your building occupants, employees, maintenance staff, contractors or visitors. Customize your communications and interactions with them for the most effective way to gain their cooperation."

Using effective management
The most effective tool in saving energy was managing and scheduling the HVAC and lighting systems, which was achieved by working closely with the school principal and staff throughout the year. Computerized building automation system (BAS) control and scheduling software was used to fine-tune and continually adjust system settings to accommodate the specific comfort needs of the school, while using the least amount of energy to do so.

Some examples of steps Claiborne's energy team took include setting back cooling, heating, and lighting levels when rooms are unoccupied; determining how many chillers and hot water boilers are needed to meet the temperature and humidity needs of the school; and automatically adjusting the amount of fresh air being brought into the building to meet the occupancy and ventilation requirements during any given part of the day.

Creating a culture of energy conservation
Claiborne created a culture of energy conservation by involving everyone in its mission. Frequent energy conservation awareness presentations to students and teachers explained specific steps they could take to save energy, as well as the importance of conserving the earth's resources. Students learned about simple actions they could take to make a difference, including adjusting thermostats, keeping doors and windows closed when cooling or heating systems are operating, and making sure all electronic devices in their classrooms are shut off at the end of the day. During the year, aspects of energy conservation were integrated into activities outside the classroom—such as the school's "Spooky Math & Science Night" on Halloween—supporting the school's efforts to develop the next generation of energy conservation leaders!

BATTLE OF THE BUILDINGS

Learn more about EPA's National Building Competition at energystar.gov/BattleOfTheBuildings

5. Recognize success

- EPA promotes via traditional and social media
  - Press release
  - Posts on Twitter and Facebook
- Certificates
  - Several categories of winners
- PSA
- Leadership at events
- Case studies of winners
  - “What’s your best energy-saving advice?”

“Start simple. There are a surprising number of options available in most buildings to improve energy efficiency and realize cost savings without breaking the bank or requiring complex solutions.”

Questions?

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