

# Carbon and cost savings through LED lighting: a Carbon Reduction Challenge project for Brown Bag Marketing™ Summer, 2018

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## Statement of Problem

- Brown Bag's office resides on the 20th floor of the One Buckhead Plaza.
- 48 incandescent light bulbs was being used in the office.
- Our goal was to replace incandescent bulbs with LED eco-friendly lightbulbs.
- LED lightbulbs use 80 percent less power than incandescent lights.
- Lasting up to 20 years we were able to reduce company costs and eliminate thousands of carbon emissions.

## Carbon Reduction Strategy – LED bulbs



### Stage 1: Office Only

- Purchase 48 LED lightbulbs to replace all incandescent lightbulbs in the office
- Total bulbs: 48 LED bulbs screwed in
- Total cost: \$64.95 after tax
- **Carbon reduced: 12,850 lbs.**
- Cost savings: \$574 to Brown Bag

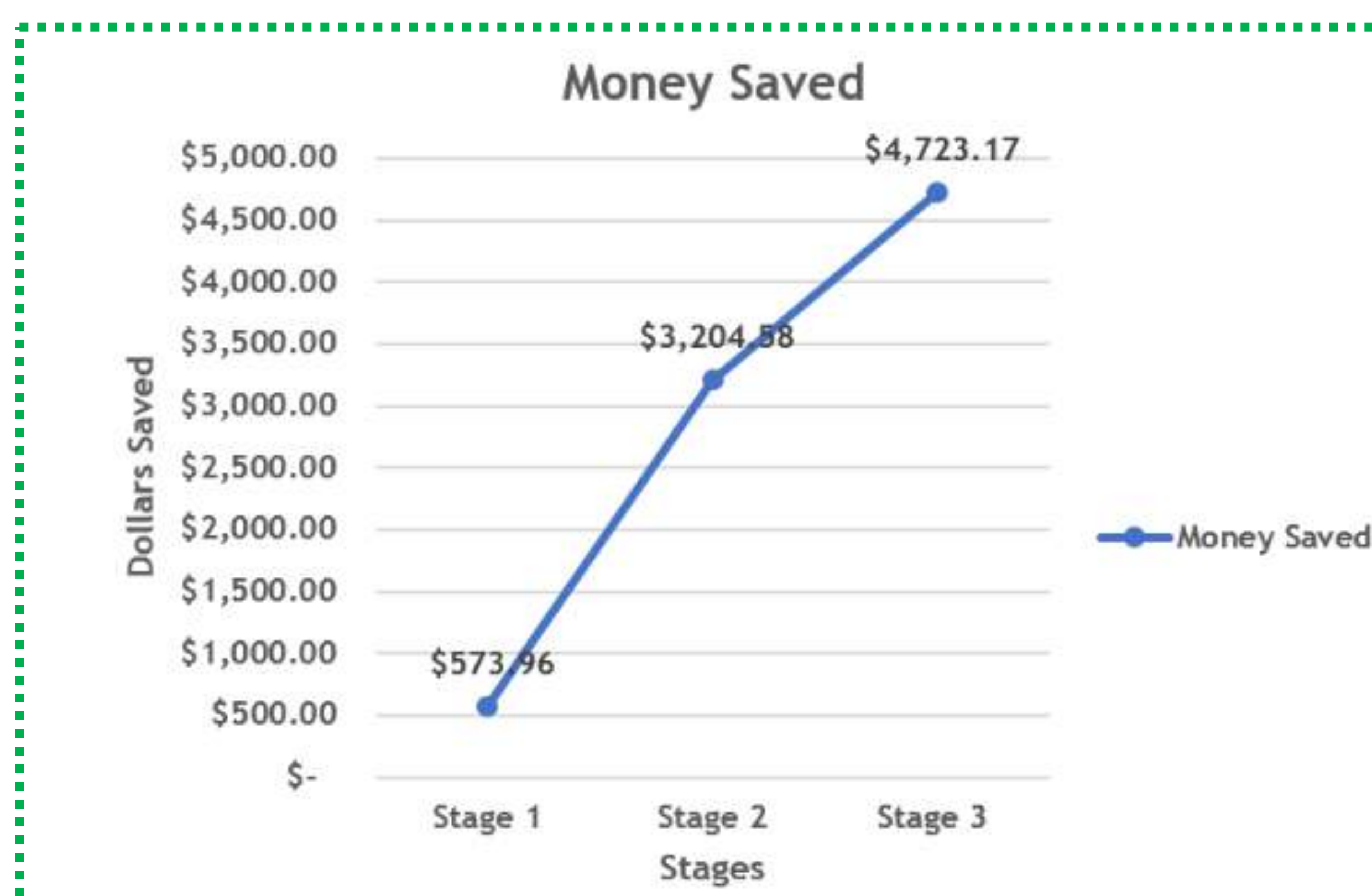
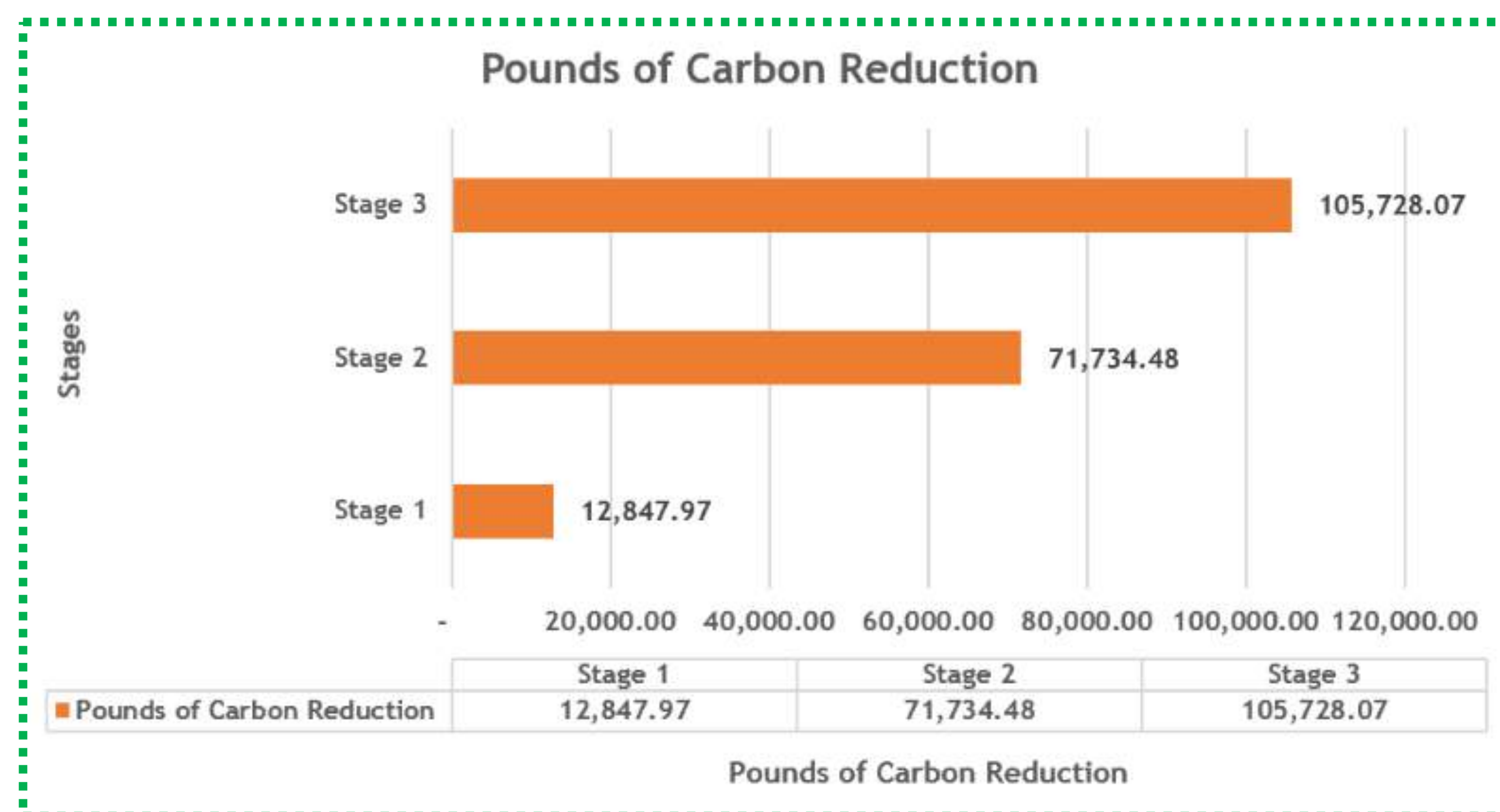
### Stage 2: Four free LED lightbulbs for each employee

- 4 LED lightbulbs free of charge for each employee (220 LED bulbs for 55 employees)
- Total bulbs screwed in: 220 LED
- Total cost: \$361.98 after tax
- **Carbon reduced: 71,734 lbs.**
- Cost savings: \$3,204 to employees

### Stage 3: Lightbulb Campaign

- Begin a company-wide campaign to switch out additional lightbulbs to LED and educate employees
- Intern pick-up service for employees to request purchases for extra bulbs that need to be replaced in their homes
- Incentivize employees with VISA gift cards for top 3 employees with extra bulbs purchased
- Total bulbs: 395 LED lightbulbs screwed in
- Total cost: \$808.47 after tax
- **Carbon reduced: 105,728 lbs.**
- Cost savings: \$4,723 to employees

## Results



## How much CO<sub>2</sub> did we reduce?

- The average American emits 40,000 pounds of carbon emissions annually = 4 African elephants
- In Stage 1, we reduced 12,848 pounds of carbon emissions = 1 large beaked whale
- In Stage 2, we reduced 71,734 pounds of carbon emissions = 1 giant humpback whale
- In Stage 3, we reduced 105,728 pounds of carbon emissions = 1 enormous fin whale

Thanks to a supportive and earth-loving staff, we successfully impacted not only our office but also the surrounding communities in Atlanta. By implementing our Lightbulb Campaign, we inspired people to switch out wasteful lightbulbs that with eco-friendly LED lightbulbs.

## Lightbulb Campaign

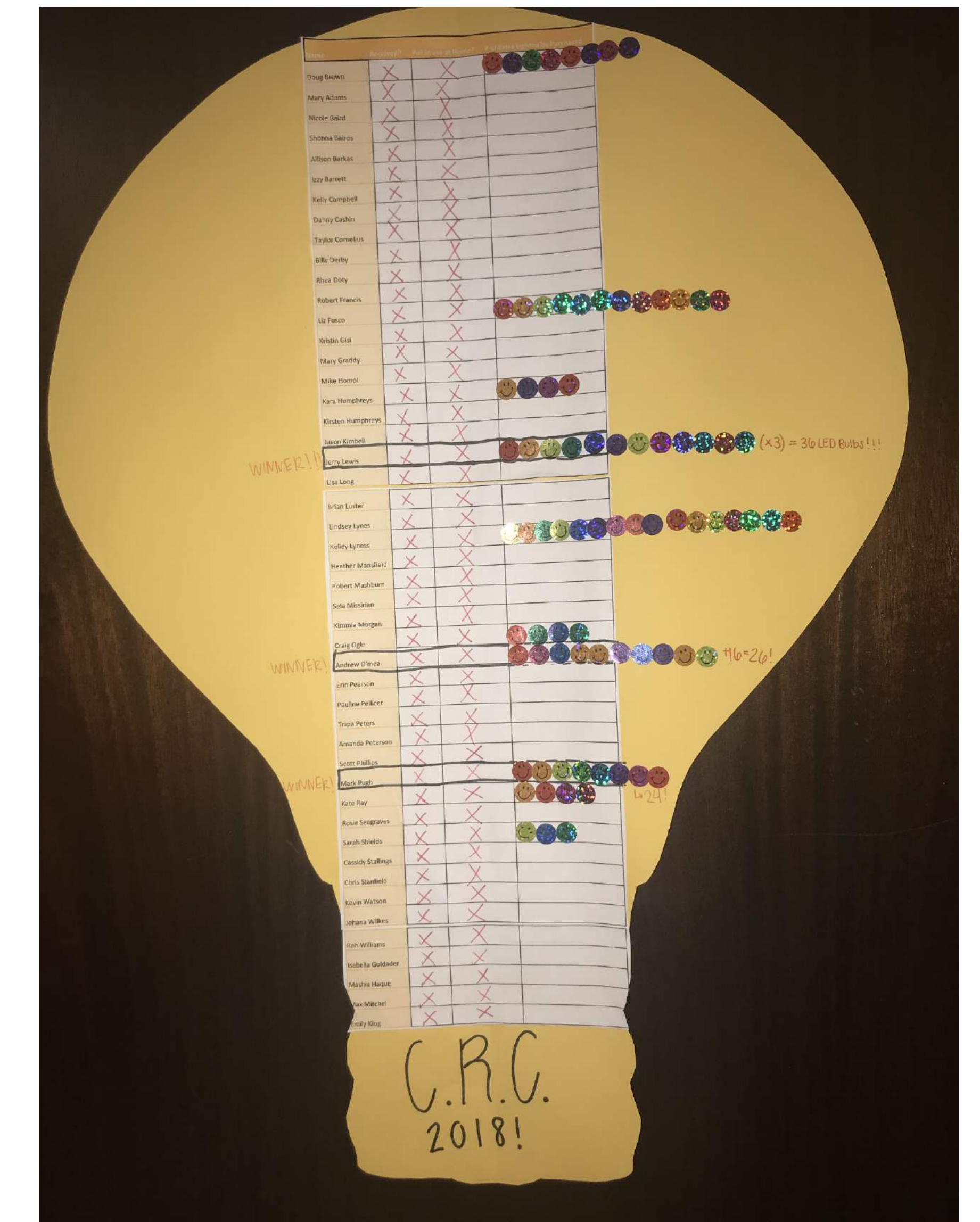


Chart of light bulb challenge highlighting the employee lightbulb challenge, showing winning employees.

## References

[http://www.apo-tokyo.org/publications/wp-content/uploads/sites/5/2012\\_Sep-Oct\\_p4-5.pdf](http://www.apo-tokyo.org/publications/wp-content/uploads/sites/5/2012_Sep-Oct_p4-5.pdf)

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