



# Making the Business Case for Data-Driven Energy Management

Wednesday July 10<sup>th</sup>, 2019

1:30 – 3:00 PM



# Some data to make the case for data...

\$0.30 of every EE program dollar is spent on *administration* – including data collection, management, and verification.

Cities are spending 0.5-1.0 FTEs each year at a cost of \$50-100,000 on data needs related to EE program implementation.

# Speakers



**Harry Bergmann**  
Moderator  
DOE



**Ryan Freed**  
Speaker  
Institute for Market  
Transformation (IMT)



**Daniel Hill**  
Speaker  
Environmental  
Defense Fund (EDF)

**Ryan Freed**

Institute for Market Transformation (IMT)

# Small Business Energy Initiative:

## Making the Energy Efficiency Case Together

7/10/2019

- Ryan Freed, IMT



# Challenge & Approach

Small and medium-sized buildings (<100,000 sq. ft.) account for over 90% of U.S. commercial buildings and are often occupied by small businesses.

These space types are difficult to engage due to:

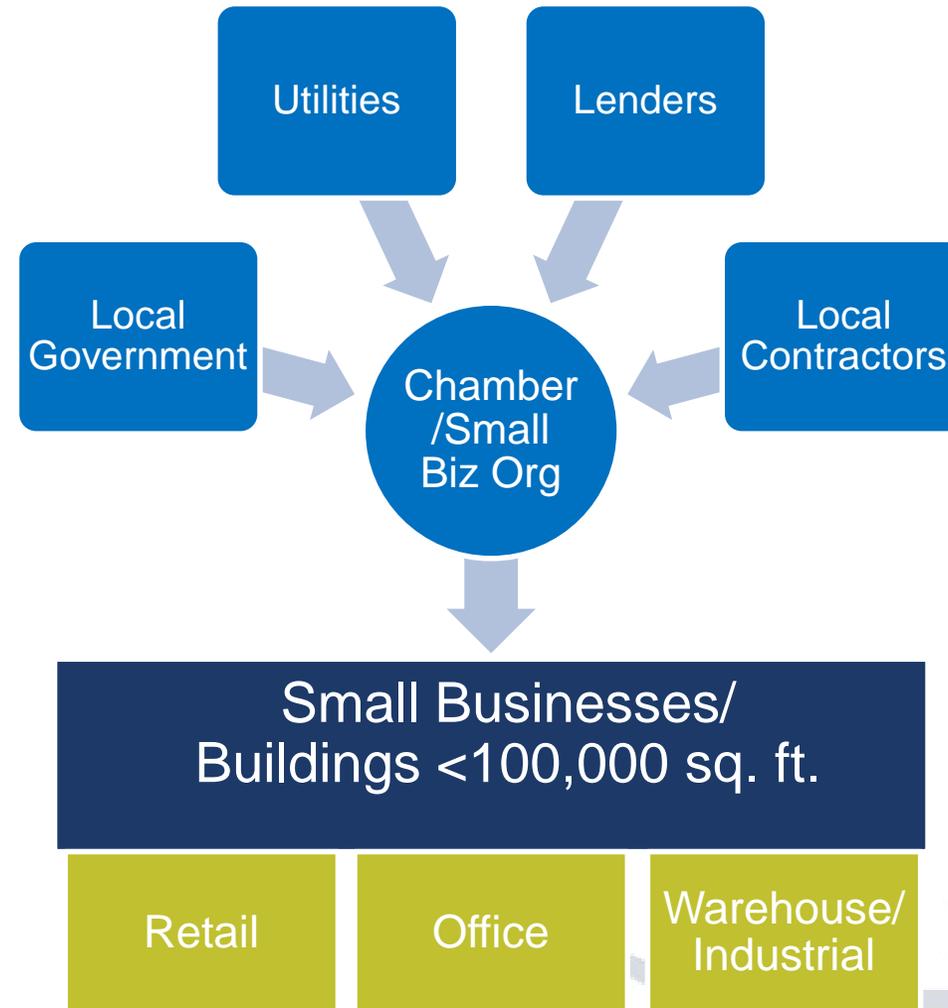
- Lack of energy-saving expertise
- Limited access to cash or debt
- Reduced staff time to make operational changes.

(Source: *U.S. DOE*)

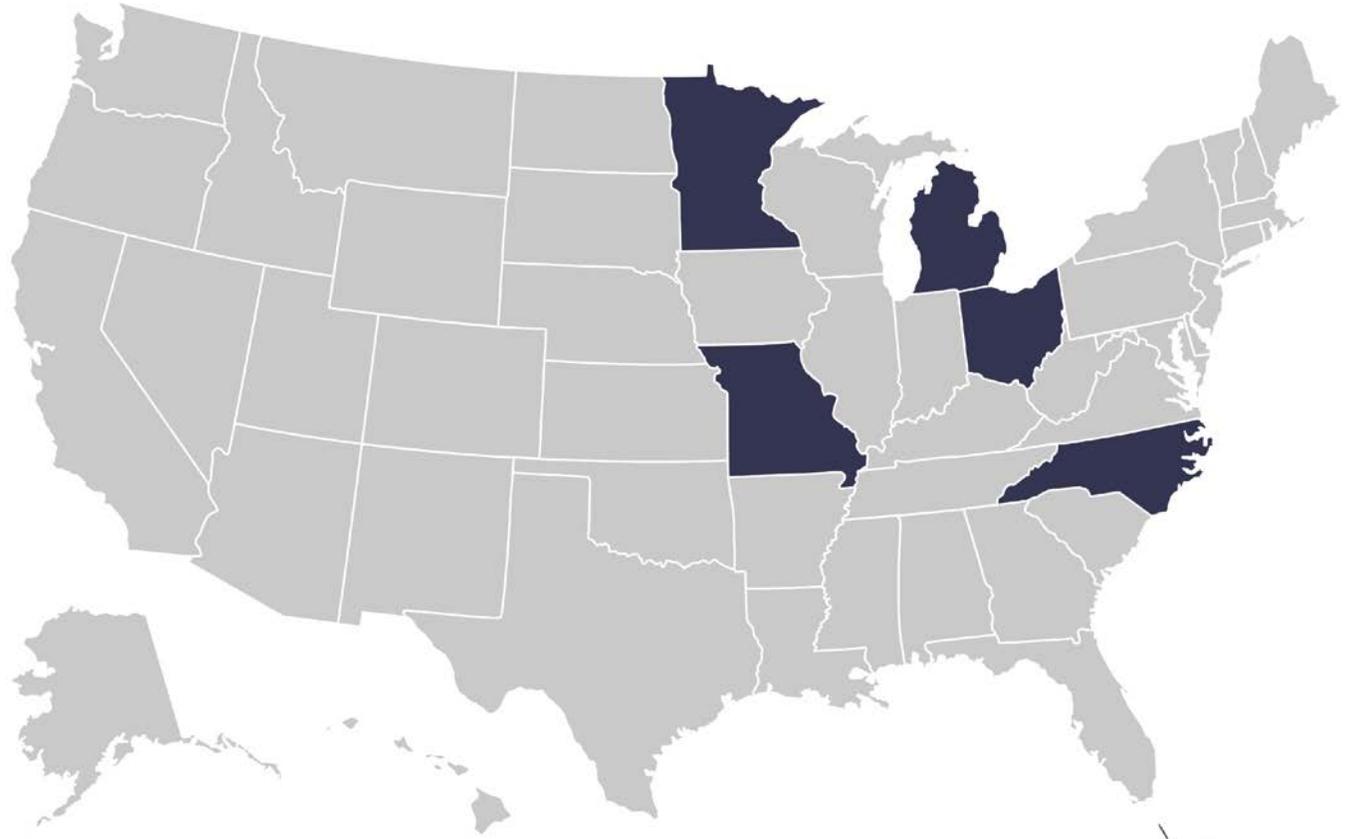


# Approach

Engaging small businesses requires partnering with organizations they already work with and value such as local chambers of commerce and small business organizations.



# SBEI Partners & Members



# Project Activities & Outputs

## Energy Assessments

- \$8.7 million energy savings uncovered through 553 audits

## Financing & Contractor Consulting

- 82 retrofits or financing completed

## Educational Seminars

- 6 IMT-led educational seminars

## Lease Reviews

- Two organizations achieved IMT and DOE's Green Lease Leader recognition

## Stakeholder Engagement

- Growth from 3 organizations to 13

# Action Guide



## **SMALL BUSINESS ENERGY INITIATIVE ACTION GUIDE:**

How chambers of commerce can lead on energy efficiency and drive high performance and savings for small businesses

Prepared by the Institute for Market Transformation and the Greater Cleveland Partnership/Council of Smaller Enterprises



## Guide features:

- Customizable Action Plan
- Stakeholder Engagement Strategies
- Helpful Checklists
- Case Study Templates
- Green Leasing 101 Toolkit

[www.imt.org/sbei](http://www.imt.org/sbei)



# Action Guide

## Local Government Engagement Checklist

More cities, counties, and states are setting ambitious energy reduction goals that are good for the economy and good for the environment. A local government can be a key ally in a chamber organization's efforts to meet the energy and sustainability needs of small businesses and the buildings they occupy. If you are considering launching an energy efficiency program, the checklist below will help with crucial early steps to successfully engage with local government and gain public support for creating greater energy- and dollar-saving opportunities for small business members.

STAGE	OBJECTIVE
1. Assessing Priorities	Assess the energy landscape and capabilities of local government
2. Program Development	Understand local government context in order to build a viable energy efficiency program
3. Program Implementation	Coordinate efforts to maximize the impact of program(s)
4. Long-term Collaboration	Sustain a partnership with local government over time

### STAGE 1: ASSESSING READINESS

- ❑ What is your organization's existing relationship with the municipal government(s)?
  - ❑ Who are your primary points of contact with the city?
  - ❑ Who are the people your members regularly work with in the city?
  - ❑ Does your local jurisdiction have any energy or climate reduction goals?
  - ❑ Are there any laws, voluntary programs, or incentives offered by your jurisdiction that apply to members?
    - ❑ If so, how do these energy policies or programs affect small businesses?
    - ❑ How are energy efficiency programs funded?
- ❑ Who are the relevant contact persons that manage these energy policies and programs?
  - ❑ **PACE** (Property Assessed Clean Energy) financing offered locally? If so, who administers those programs?
  - ❑ Does your municipality or state have a green bank, other energy efficiency financing offerings?
  - ❑ What is your organization's existing relationship with the state energy office and/or state public utility commission?

## Energy Efficiency Program Design Workbook

### STEP 1. PROVIDING ENERGY EFFICIENCY EDUCATION OPPORTUNITIES

Most chambers of commerce offer educational and training events as part of their missions to inform business owners and representatives about best practices for operations, safety, employee wellness, and other topics that have a major impact on businesses—like energy efficiency. Hosting seminars and partnering with local energy efficiency experts and practitioners to share best practices and resources is a smart way to provide value to small business members and the community.

PURPOSE/TASK	ACTIVITY DESCRIPTION	AVAILABLE RESOURCES	IMPACT COMPLETION DATE	STATUS
1. Evaluate a knowledge, activities, and best-practice survey	Conduct a survey to determine the baseline of energy efficiency knowledge, attitudes, beliefs, and behaviors (BAOB). Use the information to tailor project activities to membership needs.	• <b>Sample BAOB Survey</b> , Use the language presented here and adapt it as you see fit to conduct your own survey		
2. Host education seminars	Host a series of quarterly seminars to educate membership on simple steps they can take to lower their utility bills, invite local energy efficiency leaders to present solutions to the attendees. Presenters may include utility program implementers, energy efficiency contractors, business owners who have successfully addressed and improved energy efficiency, or non-profits with energy efficiency expertise.	• Visit the <b>Small Business Energy</b> , <b>Business Leadership and Success</b> • For tips on how to host a seminar, read the <b>tipsheet</b> .		
3. Utilize free educational materials	Educate members on how to increase utility savings by providing them resources that contain straight-forward guidance on practical and cost-effective steps to take. Feature descriptions and links to these resources in membership communications such as emails, newsletters, and on social media.	• <b>Making Energy Efficiency Work for You: A Resource Guide for Small Business Landlords and Owners</b> - A resource that presents simple steps small businesses can take to make their building's energy use. • <b>Energy Efficiency Workbook</b> (ENERGY STAR has created a workbook that walks small businesses through creating their own comprehensive energy efficiency plan) • <b>Technical Resources for Specific Sectors</b> ENERGY STAR has created a sector-specific resource for restaurants, auto dealers, lodging, offices, grocery and convenience stores, small- and medium-sized manufacturers, and home-based businesses.		

## INFO

### PROMOTIONAL TOOLKIT: FLYERS

The following flyer examples are available for organizations to use in their efforts to spread the word about energy efficiency to small business members and contacts. The samples included in this guide are for illustrative and educational purposes only and do not reference actual chambers or businesses. Any likeness inferred to actual persons or businesses is unintended.

Organizations interested in creating promotional materials for an energy efficiency program should contact IMT for customizable InDesign flyer templates and support from its staff. To get in touch, send an email to [info@imtdirect.org](mailto:info@imtdirect.org).

**Featured templates include:**

- Educational Seminar Event Flyer:** This template can be used to promote educational seminars and presentations.
- Informational Flyer:** This flyer template can be used to raise awareness in any community about actionable energy-saving opportunities for small businesses.

## STAKEHOLDER ENGAGEMENT TOOLKIT

Every city and town has a different landscape of available energy-saving programs, financing opportunities, and service providers. However, most small businesses are not aware of the readily-available solutions in their areas or who to talk to for help. A chamber or small business organization can provide small business members a valuable service by assessing the local landscape and connecting business owners with trusted contractors, hosting educational events with local experts, and leveraging existing government or utility programs. To do this requires strong relationships. The following toolkit provides flexible checklists on how to engage the right community stakeholders to build an effective network that will support an organization's energy efficiency program and its small business members.

**FEATURED CHECKLISTS INCLUDE:**

- Contractor's Network Checklist:** Learn how to assemble local energy efficiency contractors to aid small business members in conducting energy audits, executing lighting and equipment upgrades and other energy- and water-saving solutions.
- Local Government Engagement Checklist:** Use this checklist to develop a strong and beneficial relationship with local municipality or state government to gain public support in launching an energy efficiency program and providing more savings opportunities to small businesses.
- Private Sector Engagement Checklist:** Create energy-saving dialogue between landlords and tenants to align incentives and foster collaboration for investing in efficiency.
- Utility Engagement Checklist:** Learn how to disseminate utility efficiency programs to members while also influencing how utility programs are designed and executed to maximize benefits to small businesses.

## GREEN LEASE TOOLKIT

Green leases (also known as aligned energy leases, high-performance leases, or energy-efficient leases) align the financial and energy incentives of building owners and tenants so they can work together to save money, reduce emissions, and ensure the efficient operation of buildings. Use this toolkit to help improve relationships between tenants and landlords through green leasing. Learn about leasing best practices, and lease clauses that address sustainability, and present these lessons to business members.

Reach out to IMT and SCP/COSE for assistance with green leasing. Send us an email at [info@imtdirect.org](mailto:info@imtdirect.org) to get in touch and be sure to visit [greenleaselibrary.com](http://greenleaselibrary.com).

**This toolkit includes:**

- Green Leasing for Laymen Infographic:** Start here to learn about the benefits of green leasing.
- Green Leasing Frequently Asked Questions:** Get answers and solutions for getting started on enhancing a lease with energy efficiency clauses.
- Sample Green Lease Language:** Get inspired to take energy-saving action with sample green lease clauses.

# Deeper Engagement in the Twin Cities

- Energy Coaching with neighborhood-based teams
- Incorporating State One-Stop Efficiency Shop
- One-on-One engagement and customized recommendations

“Small businesses are inundated with requests and opportunities on a daily basis. To pursue **energy efficiency**, they need trusted partners to make it accessible and easy. *That's where we come in.*”

– Matt Kazinka  
Lake Street Council



# Deeper Engagement in the Twin Cities



*New energy-efficient lighting at Taqueria La Hacienda looks great and helps to save the restaurant money on energy bills.*

"It makes a big difference in the kitchen, especially during slower times like breakfast," Zagal says. "Before, the hood was running constantly, but now the efficient system saves energy by cycling down when the grill isn't running." It's paying off with better comfort for staff too, because the new system keeps the kitchen cooler. "With better equipment, I save money, and do my part to conserve energy and help the environment—so everyone is winning."

- **Restaurant's Annual Savings: \$3,494.91**
- **Project Costs: \$16,400**
- **Utility Rebates: \$3,080**
- **Grants: \$1,500**
- **Final Costs (minus funding): \$9,320**
- **Payback: 1.6 years**
- **Annual Energy Savings: 10,535 kWh**

Source: [https://www.betterenergy.org/wp-content/uploads/2018/12/Taqueria-La-Hacienda-case-study\\_R2.pdf](https://www.betterenergy.org/wp-content/uploads/2018/12/Taqueria-La-Hacienda-case-study_R2.pdf)

**Thank You!**

Ryan Freed

[ryan.freed@imt.org](mailto:ryan.freed@imt.org)

[www.imt.org/sbei](http://www.imt.org/sbei)



**Daniel Hill**

Environmental Defense Fund (EDF)



CLIMATE CORPS

Accelerate. Accomplish.  
Realize your energy goals.



July 10, 2019

Daniel Hill



## EDF Climate Corps:

- **Summer-long fellowship program**
- **Trained grad students embedded in your organization**
- **Accelerate and accomplish sustainability projects**

**BARRIER:**

**What can I do?**

BARRIER:

~~What can I do?~~

How do I get it done?

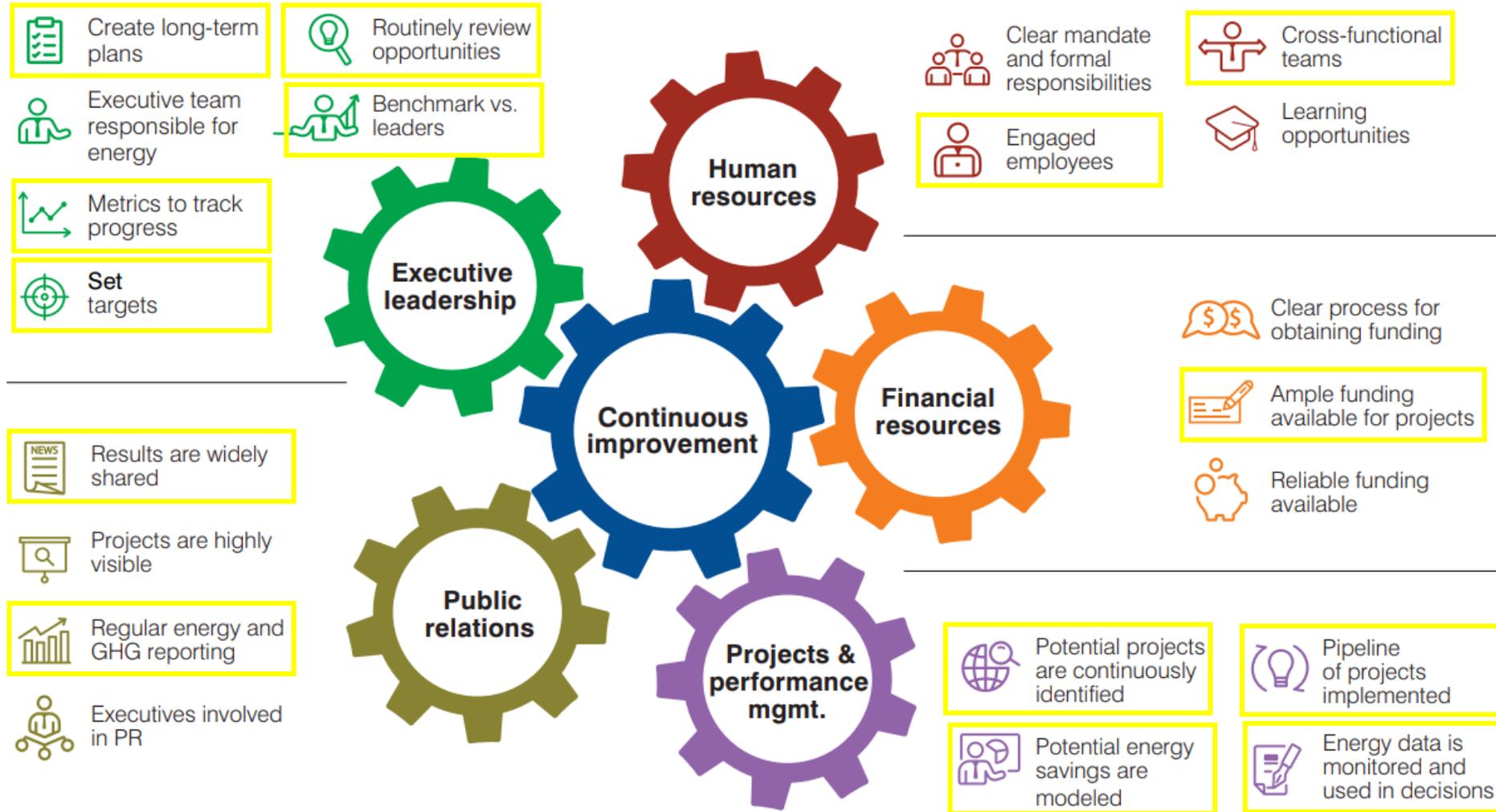
THE HOW STARTS WITH:

**DATA**

# VIRTUOUS CYCLE OF STRATEGIC ENERGY MANAGEMENT



# VIRTUOUS CYCLE OF STRATEGIC ENERGY MANAGEMENT



DATA MUST BE:

**ACCURATE &  
ACTIONABLE**



# starwood

\*  
Hotels and  
Resorts



SCENARIO



Low- and no-cost  
efficiency  
opportunities



Next projects will  
require capital



1,200+ properties  
across 100  
countries



# PAINPOINTS



Front of house renovations tend to take priority



Back of house would need strong, reliable business case



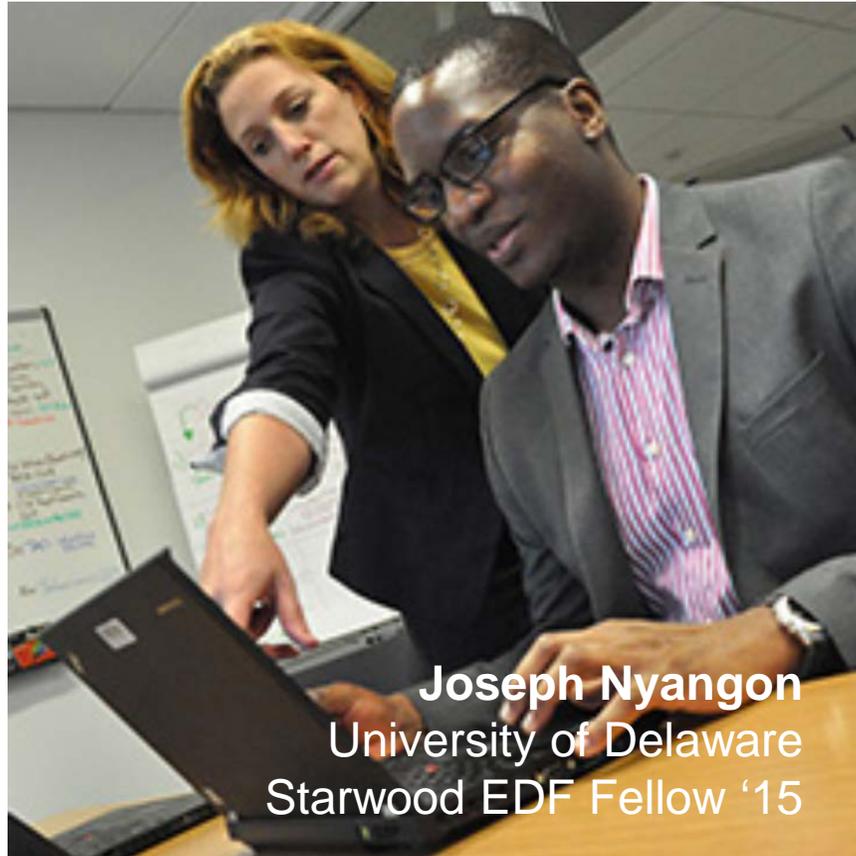
Uncertainty around energy usage: weather and occupancy



NEED

**Accurate and actionable data  
to inform decisions**

## SOLUTION



- Performance measurement tool utilizing regression analysis of energy and water variables
- Shows business case of reducing energy and water consumption
- Migrated into Starwood intranet
- Expedites decision process for engineering leadership

Value: ~\$20k per property or \$25M portfolio



# THE STARWOOD EXPERIENCE

“How the tool works is fairly complicated pulling in multiple types of data, but you don’t have to understand regression or be a highly technical person to use the tool. That was one of our main objectives.”

*Andrea Pinabell*

*VP of Sustainability, Starwood*



**GUESS**



# SCENARIO



Targeting retail store lighting



Hundreds of stores in US & Canada



All stores unique: energy use, layout, current lighting



NEED

Store-level data to inform  
investment strategy

## SOLUTION



**Robert Bartolucci**  
Presidio University  
Guess EDF Fellow '17

- Created database for each store: energy, operating hours, fixture schedules, location-based emissions, utility rebates
- Created comprehensive investment analysis workbook detailing NPV and GHG for each potential retrofit
- Recommended prioritized list for implementation

Impact: 9.1 million kWh annual savings

# PROJECT AREAS



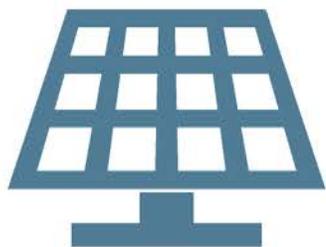
## Supply Chain Sustainability

focused on energy,  
including scope 3



## Setting GHG Targets

that are ambitious  
and science-based



## Renewable Energy

including on/off-site  
and procurement



## Scaling Energy Efficiency

including new technology  
and financing



**John Schinter**  
AVP, Energy and Smart Buildings  
AT&T



**Jen Snook**  
Duke University  
AT&T  
2010 Fellow





**HVAC energy efficiency**

2011



**Energy & water efficiency**

2012



**Employee engagement**

2013



**Cloud-based energy monitoring**

2014



**Smart Cities - data collection framework**

2016

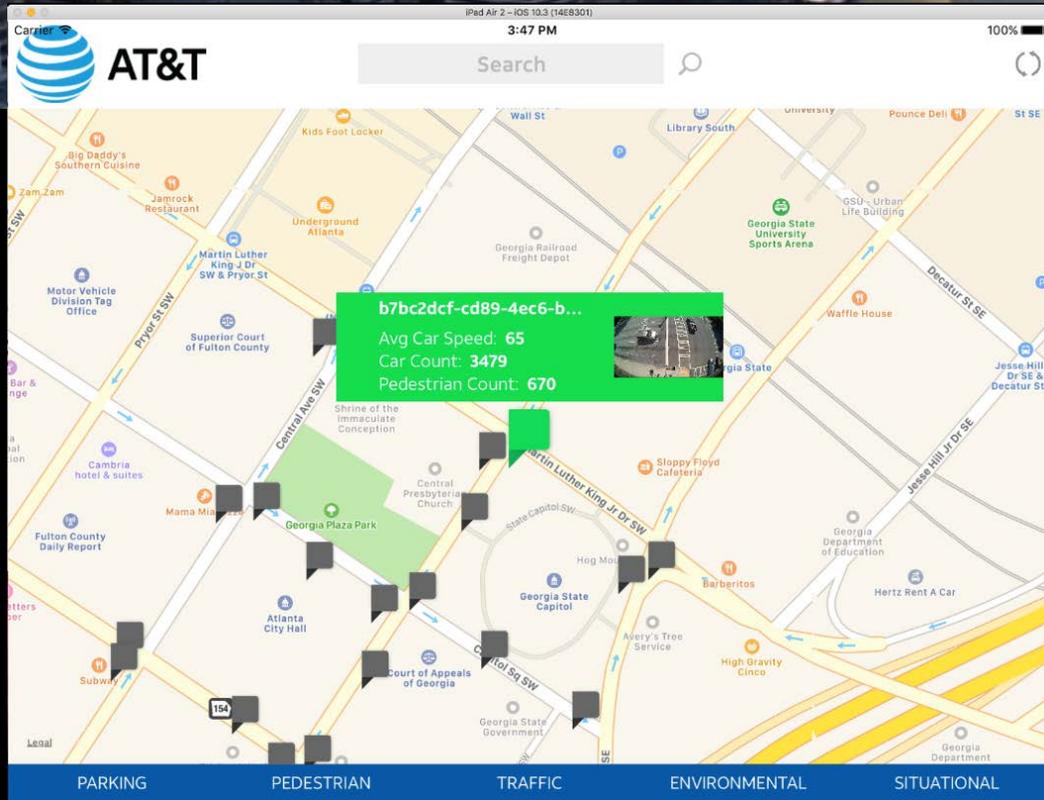
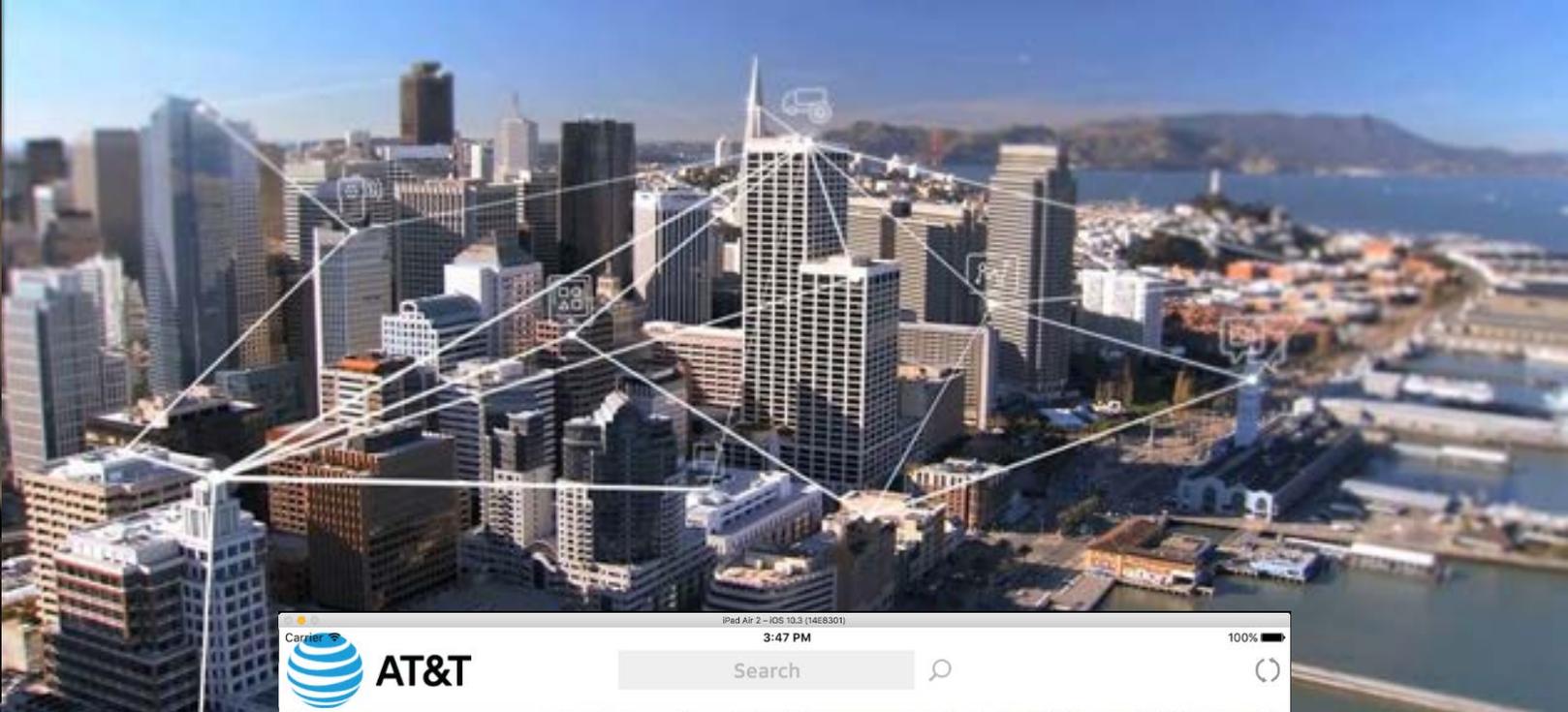


**Smart Cities – carbon emissions quantification**

2017

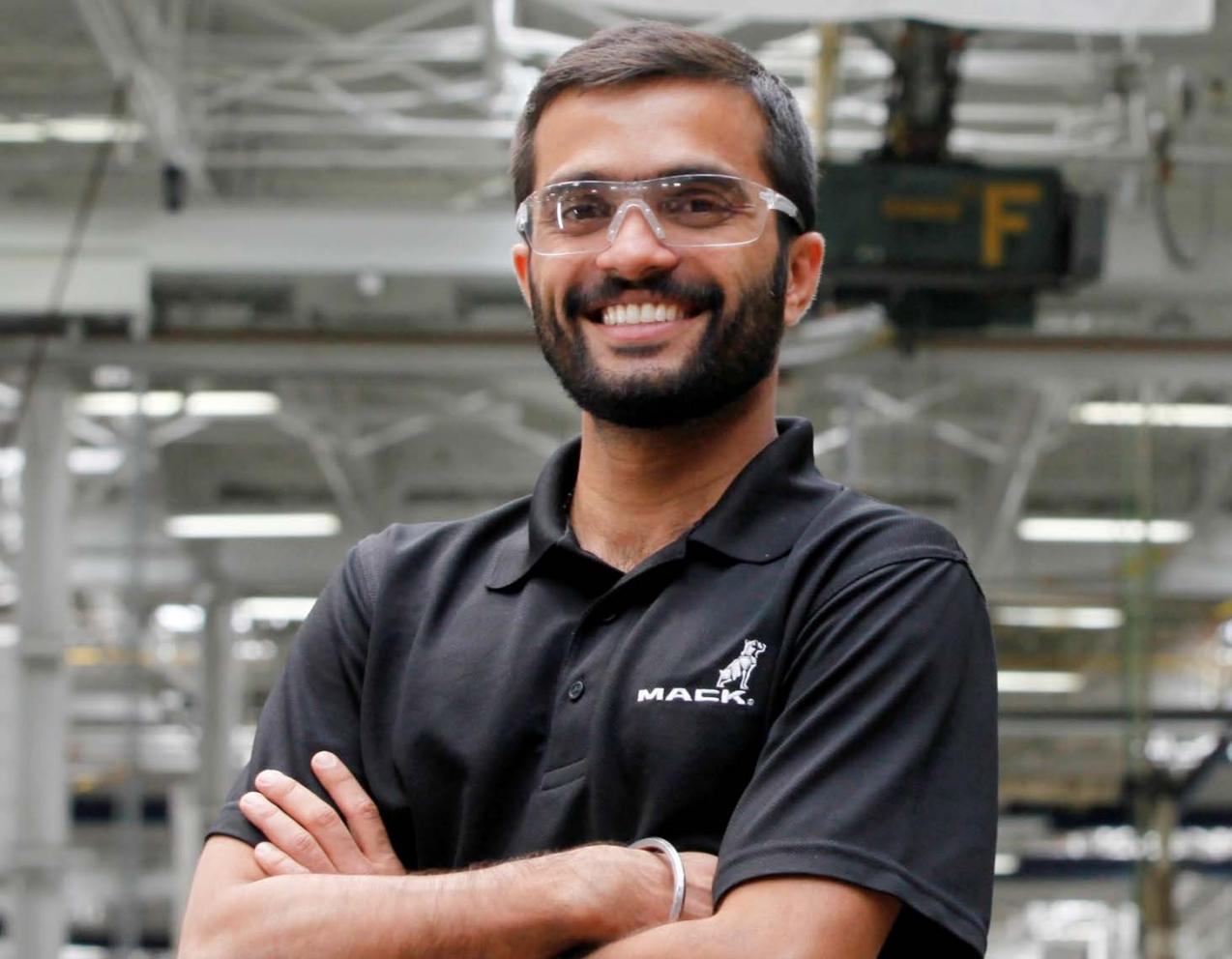


Isabella Wechsler  
 Harvard University  
 AT&T  
 2018 Fellow



THE HOW STARTS WITH:

**DATA &  
PEOPLE**



**You =**  
time constrained,  
resource constrained,  
aka BUSY



**EDF Fellow =**  
highly-skilled,  
laser-focused,  
looking for opportunity



**Daniel Hill**

[dhill@edf.org](mailto:dhill@edf.org)



**CLIMATE CORPS**

[edfclimatecorps.org](http://edfclimatecorps.org)

# How to Get Involved

## Timeline:



**Enroll by February 1, 2020**

[edfclimatecorps.org](http://edfclimatecorps.org)



## How to get involved:

-  Pay fellow salary/travel; +/- \$15,000
-  Provide high-level and direct sponsor
-  Provide fellow access to relevant people + info
-  Report progress to EDF

# Questions

# Thank You

Provide feedback on this session  
in the Summit App!

Download the app to your mobile device or go to  
[event.crowdcompass.com/bbsummit19](https://event.crowdcompass.com/bbsummit19)

