



## Leveraging CBSM for Utilities

Emerging Technologies Conference April 2017

Kat A. Donnelly, Ph.D., P.E., CEO



# Commercial Building Framing



April 21, 2017



## The Energy Efficiency Opportunity

30% of a commercial building's energy use is **wasted energy**.

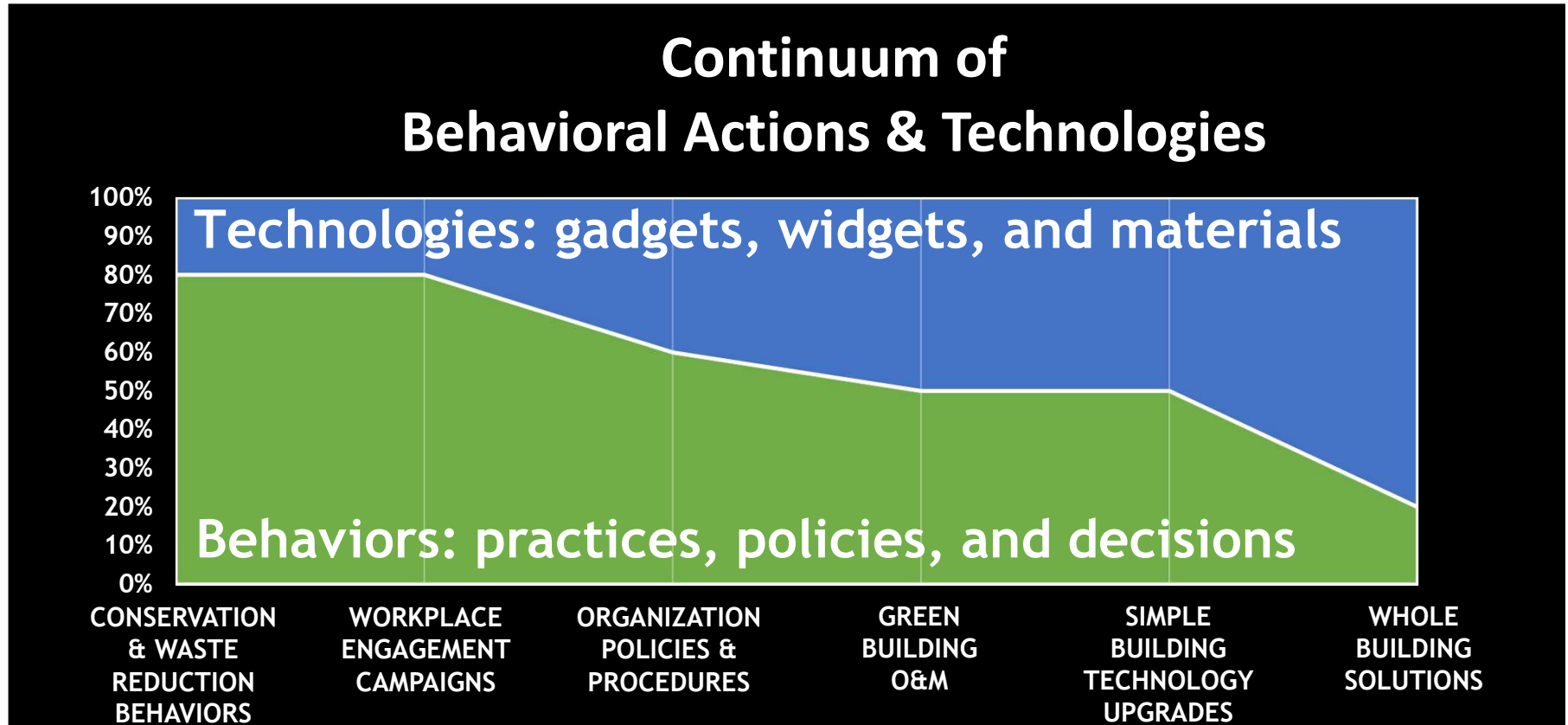
CO<sub>2</sub>  
\$\$\$\$\$

Source: U.S. EPA. <https://energy.gov/eere/buildings/about-commercial-buildings-integration-program>

April 21, 2017

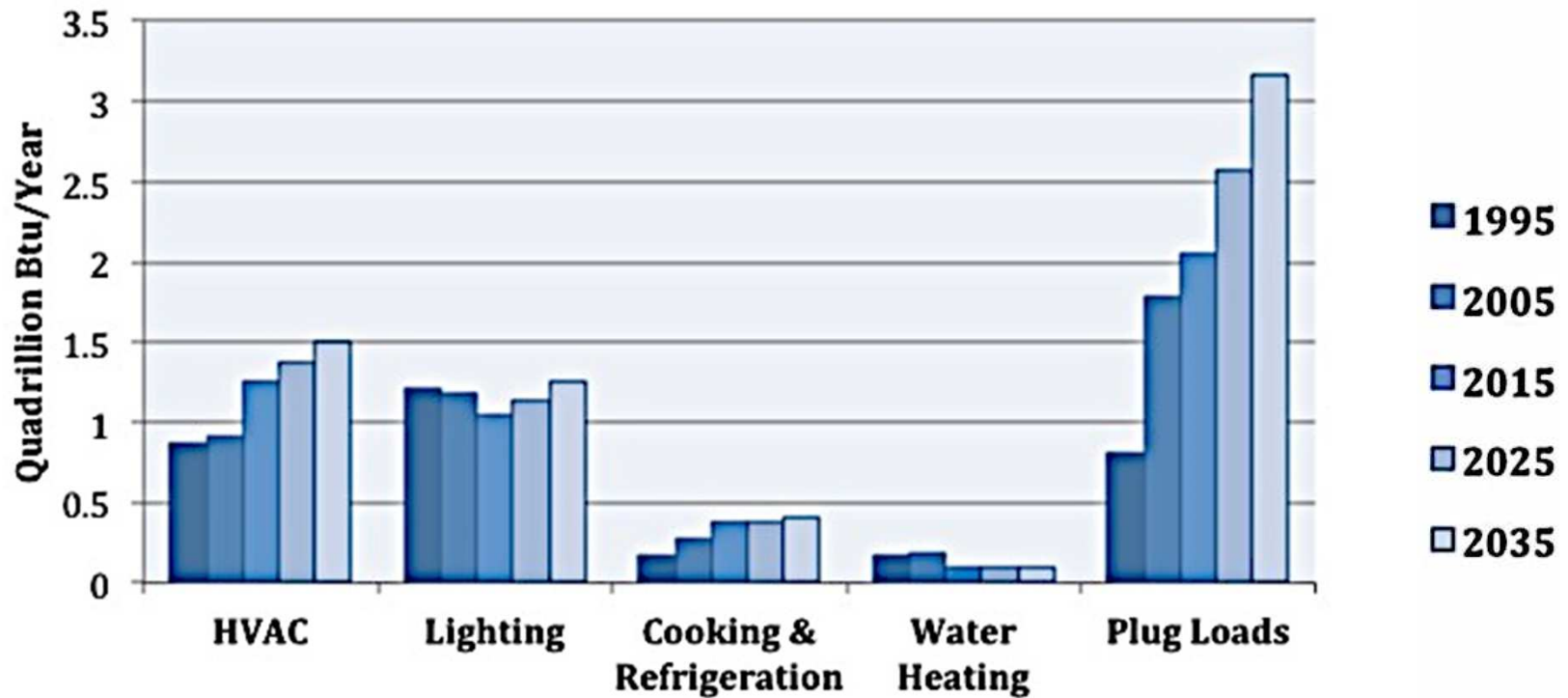
© 2017 AZENTIVE, LLC

# Behavior and Technology **Interplay**



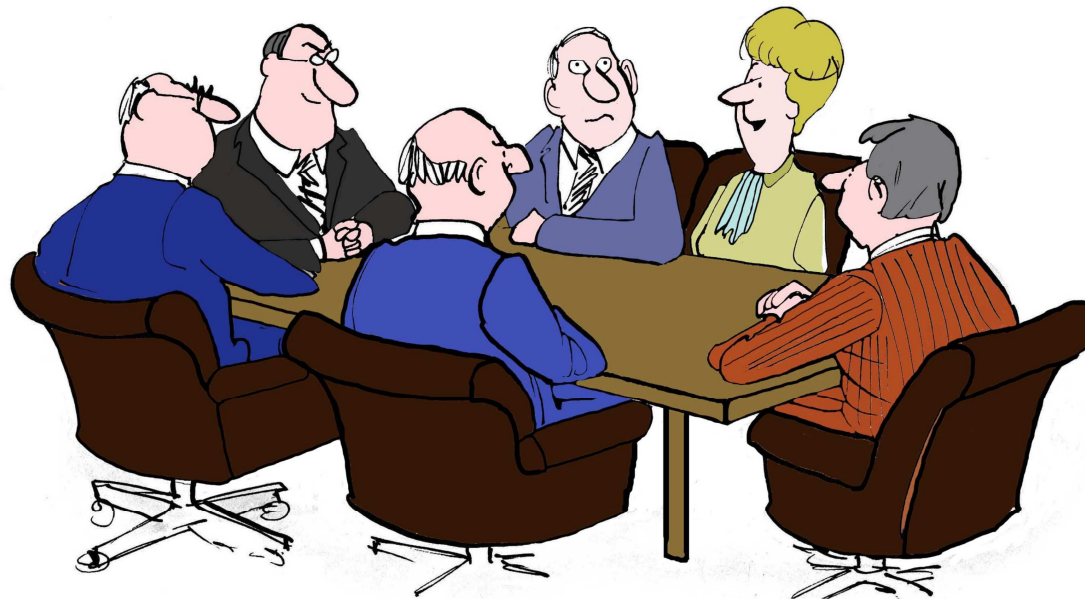
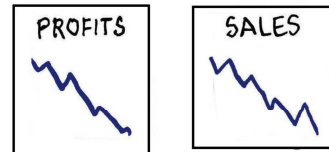
Source: Adapted from Karen Erhardt-Martinez

# Commercial Building Electricity Use



Source: Rocky Mountain Institute. Source: Energy Information Administration, <http://www.eia.gov/oiaf/archive.html>

# Engagement Campaigns



“What if we don’t change at all ...  
and something magical just happens?”



## Engagement & Wellness Programs Are ...

- Games, campaigns, and messaging that motivate employees
- Fun and thought-provoking initiatives that activate company core values
- Collective actions that build team cohesion



## Employee Engagement Campaigns

- Turn-key engagement solutions
- Toolkit with step-by-step instructions
- Baked-in behavioral science
- Measured baselines and results
- Optional support from campaign facilitator





# County Spotlight: Mecklenburg County, North Carolina



# “Crab, You’re It” CBSM Campaign

## Goals:

- Promote energy efficient behavior

## Outcomes:

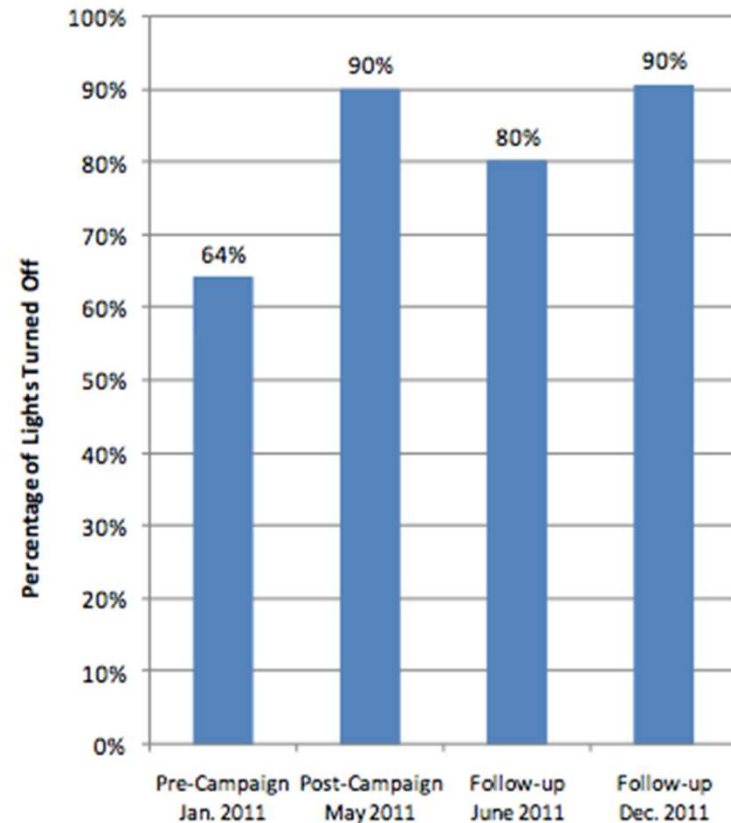
- Addressed engagement barriers
- Created new social norms
- Activated 350 employees (in the County office)



# Results

- Lasting impact
  - 26% less unnecessary lights
- Scaled up and adopted by
  - Envision Charlotte
  - Charlotte Air Awareness Program - 250 businesses
  - Greenville County - 2,000 employee participants

**Campaign Results, Pilot Phase**





# Large-CBSM Energy Efficiency Case Studies



April 21, 2017

# Envision Charlotte



## Energy Savings Goal:

- 5% behavior change
- 15% operational savings

## Qualifying Buildings

- Office building > 10,000 sq. ft
- Represents 21.5 million sq. ft. of office space and 75,000 employees

April 21, 2017

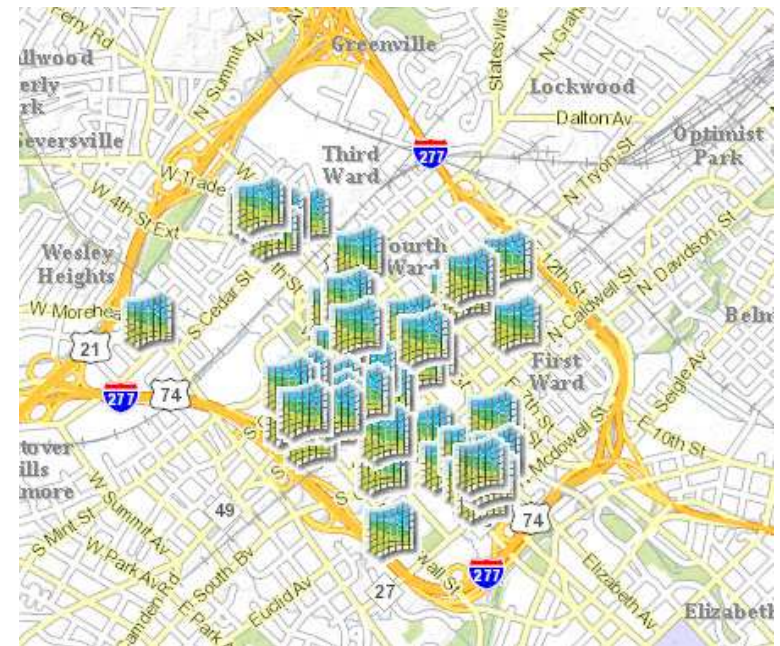
© 2017 AZENTIVE, LLC

13



# Envision Charlotte

- Grassroots
  - “Energy champions” programs
  - Marketing & Grassroots Outreach
  - Town halls
- Participation
  - 98% of eligible sq. ft.
  - Digital infrastructure



**64 of 66 qualifying building participate**

# Grassroots Program Design



- Engagement across stakeholders:
  - Building owners
  - Facility managers
  - C-Suite
  - Workers
- Over 1,500 energy champions trained
- Two waste-reducing actions
  - Flipping Out (Lights)
  - Powering Down (Office Equipment)



# Results



- Goal: 5% behavior change
- Result 2013: 6.2% energy reduction

Size Category	SEN Net Savings
Overall	6.2%
>= 100,000 SF	6.4%
< 100,000 SF	1.1%

Source: (2014) Process and Impact Evaluation of the Smart Energy Now (NC) (Pilot), TecMarkets.

- Result 2015: 17.2% energy reduction

Source: McCord, Mac, Envision Charlotte Project, 2016 Building Technologies Office Peer Review, DE-EE0007066.





# Lessons Learned and Engagement Best Practices



April 21, 2017

# Test/Learn/Adapt Across Utility Programs

Barriers	Benefits
Continuous design process	Test/Learn/Adapt: Learn what works/what doesn't work
Long implementation times	Focus on a few strategies that worked well in other markets
Buy-in across utility	Unifying methodology: seek leadership support across org
Complex set of offerings	Organize customer journeys, engagement, & follow up opportunities
Direct customer involvement	Customers become ambassadors



# Engagement Best Practices

1. Discover the right partners
2. Mobilize your champions
3. Release ownership
4. Facilitate responsibility
5. Support contractors





## Further Questions?

Kat A. Donnelly, Ph.D., P.E.  
CEO and Founder

[KDonnelly@AZENTIVE.com](mailto:KDonnelly@AZENTIVE.com)

619.880.6869