

# Rob and Melani Walton Sustainability Solutions Initiatives

**Benefits and complications of involving stakeholders and community in the design, implementation and communication of evaluations to create real-time program improvement and contextual change**

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# Global Sustainability Solutions Services

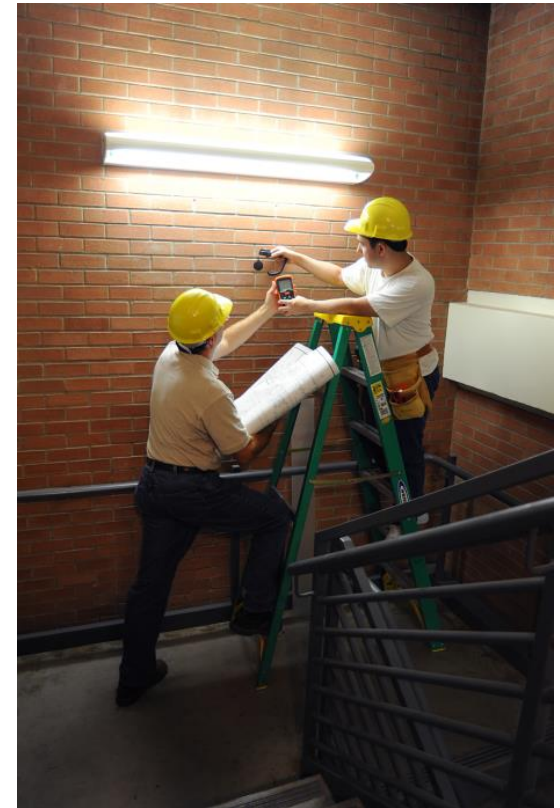
An aerial photograph of a city, likely Phoenix, Arizona, showing a dense urban landscape with numerous buildings, streets, and green spaces. In the background, a range of mountains is visible under a clear sky. The text 'Global Sustainability Solutions Services' is overlaid in the top left corner.

**Our goal:** create **customized** and **actionable solutions** to local and global challenges for businesses, governments and communities

# Overview of Energize Phoenix

A \$25MM partnership program funded by the USDOE Better Buildings Program and led by the City of Phoenix to:

- Ramp-up Energy Efficiency Efforts
- Target Commercial, Residential, and Public Properties
- Create Green Jobs
- Provide Education, Outreach, Marketing
- Establish Sustained Investment
- Transform Community Behavior



# Partners

- **City of Phoenix**

- Public Works, Neighborhood Services, Community & Economic Development

- **Arizona State University**

- Technical analysis, marketing, customer education, behavior modification (dashboard monitors)

- **Arizona Public Service**

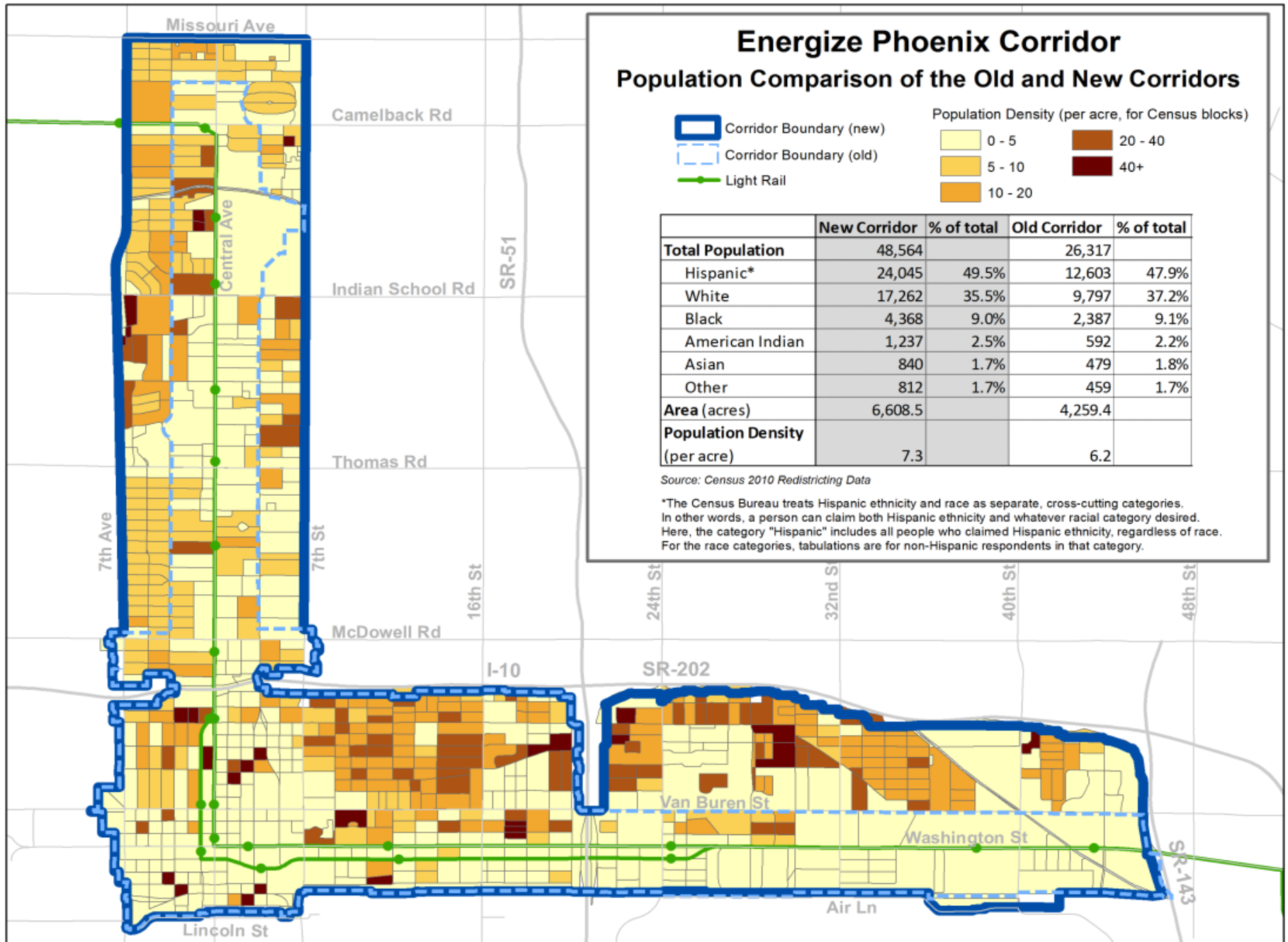
- Existing incentive program, smart meters in the corridor, robust contactor network



# Goals

- Upgrade 30MM sqft. of commercial space
- Upgrade to 1700 residential units
- Create 2000 direct and indirect jobs
- Save \$11 million of utility costs annually
- Reduce 50,000 metrics tons of GHGs annually
- Reduce energy use
  - 18% in non-residential sector
  - 30% in residential sector
  - Over 100 million kWh





# Energize Phoenix Corridor

## Population Comparison of the Old and New Corridors

  Corridor Boundary (new)  
  Corridor Boundary (old)  
—●— Light Rail

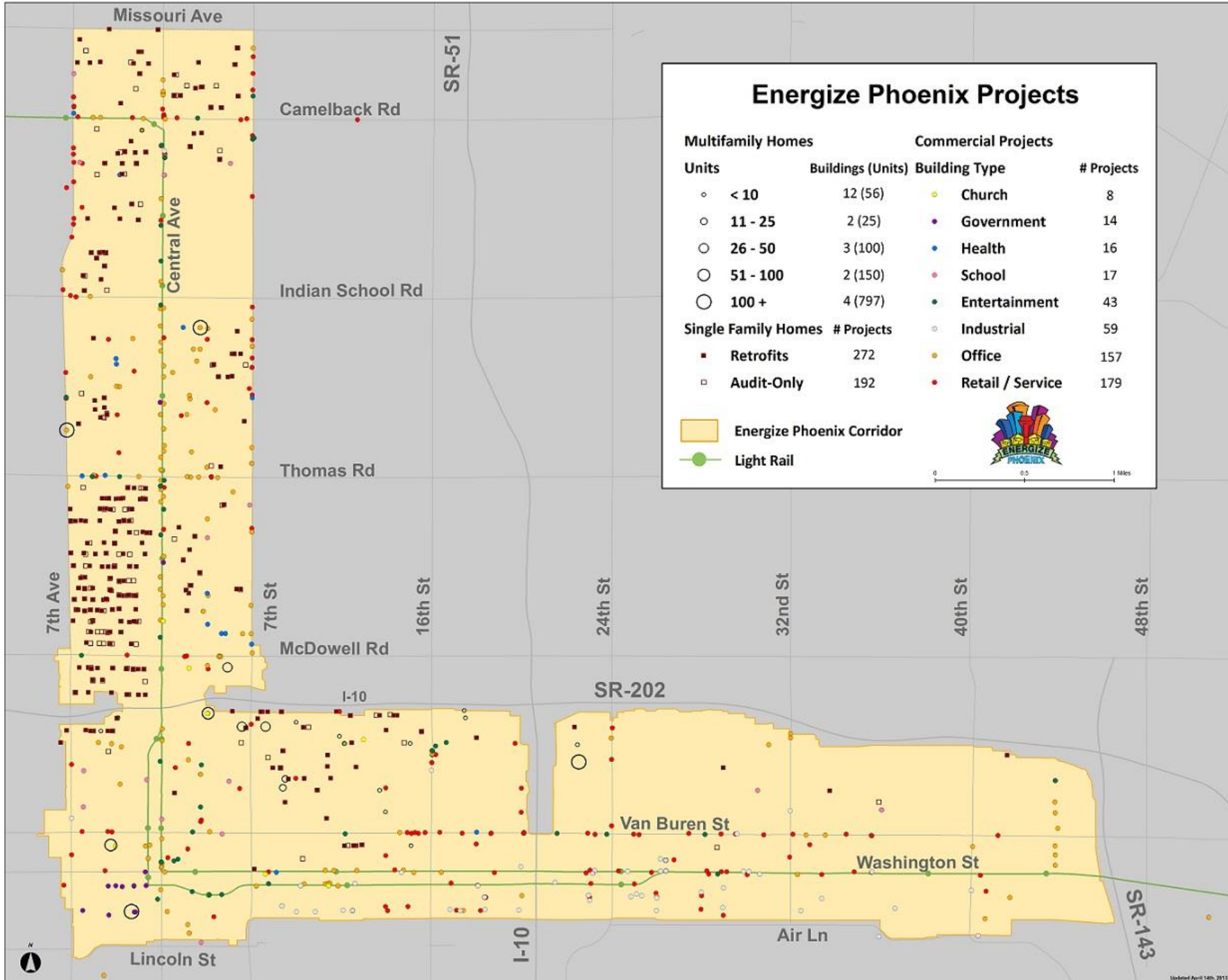
Population Density (per acre, for Census blocks)

	0 - 5		20 - 40
	5 - 10		40+
	10 - 20		

	New Corridor	% of total	Old Corridor	% of total
<b>Total Population</b>	48,564		26,317	
Hispanic*	24,045	49.5%	12,603	47.9%
White	17,262	35.5%	9,797	37.2%
Black	4,368	9.0%	2,387	9.1%
American Indian	1,237	2.5%	592	2.2%
Asian	840	1.7%	479	1.8%
Other	812	1.7%	459	1.7%
<b>Area (acres)</b>	6,608.5		4,259.4	
<b>Population Density (per acre)</b>	7.3		6.2	

Source: Census 2010 Redistricting Data

\*The Census Bureau treats Hispanic ethnicity and race as separate, cross-cutting categories. In other words, a person can claim both Hispanic ethnicity and whatever racial category desired. Here, the category "Hispanic" includes all people who claimed Hispanic ethnicity, regardless of race. For the race categories, tabulations are for non-Hispanic respondents in that category.



## Energize Phoenix Projects

### Multifamily Homes

Units	Buildings (Units)
◦ < 10	12 (56)
○ 11 - 25	2 (25)
○ 26 - 50	3 (100)
○ 51 - 100	2 (150)
○ 100 +	4 (797)

### Commercial Projects

Building Type	# Projects
Church	8
Government	14
Health	16
School	17
Entertainment	43
Industrial	59
Office	157
Retail / Service	179

### Single Family Homes

Type	# Projects
Retrofits	272
Audit-Only	192

Energize Phoenix Corridor

Light Rail

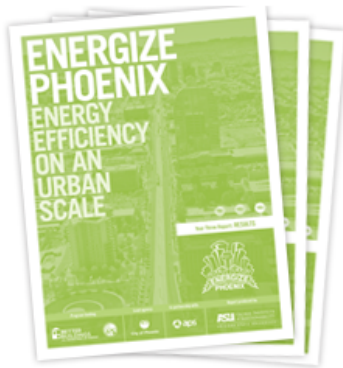


## Energize Phoenix

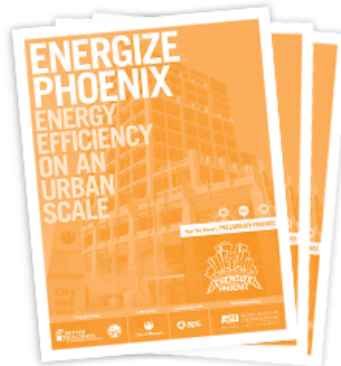
### What if the United States could develop a “new” supply of energy?

The nation's commercial and residential buildings currently consume 40% of the nation's primary energy supply, but much of that energy is lost due to inefficiency. Preventing that energy loss makes more energy available to supply other needs.

Founded through a 2010 grant from the U.S. Department of Energy, Energize Phoenix aims to eliminate up to 50,000 metric tons of carbon emissions a year, create up to 2,000 green jobs, and transform energy use along a 10-mile stretch of the Metro Light Rail system designated as the Energize Phoenix Corridor.

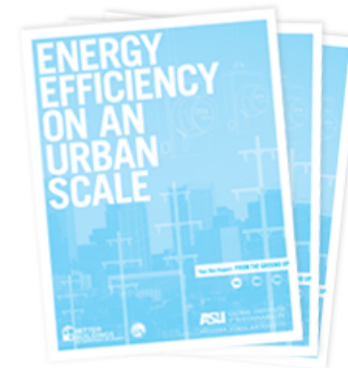


COMING FALL 2013



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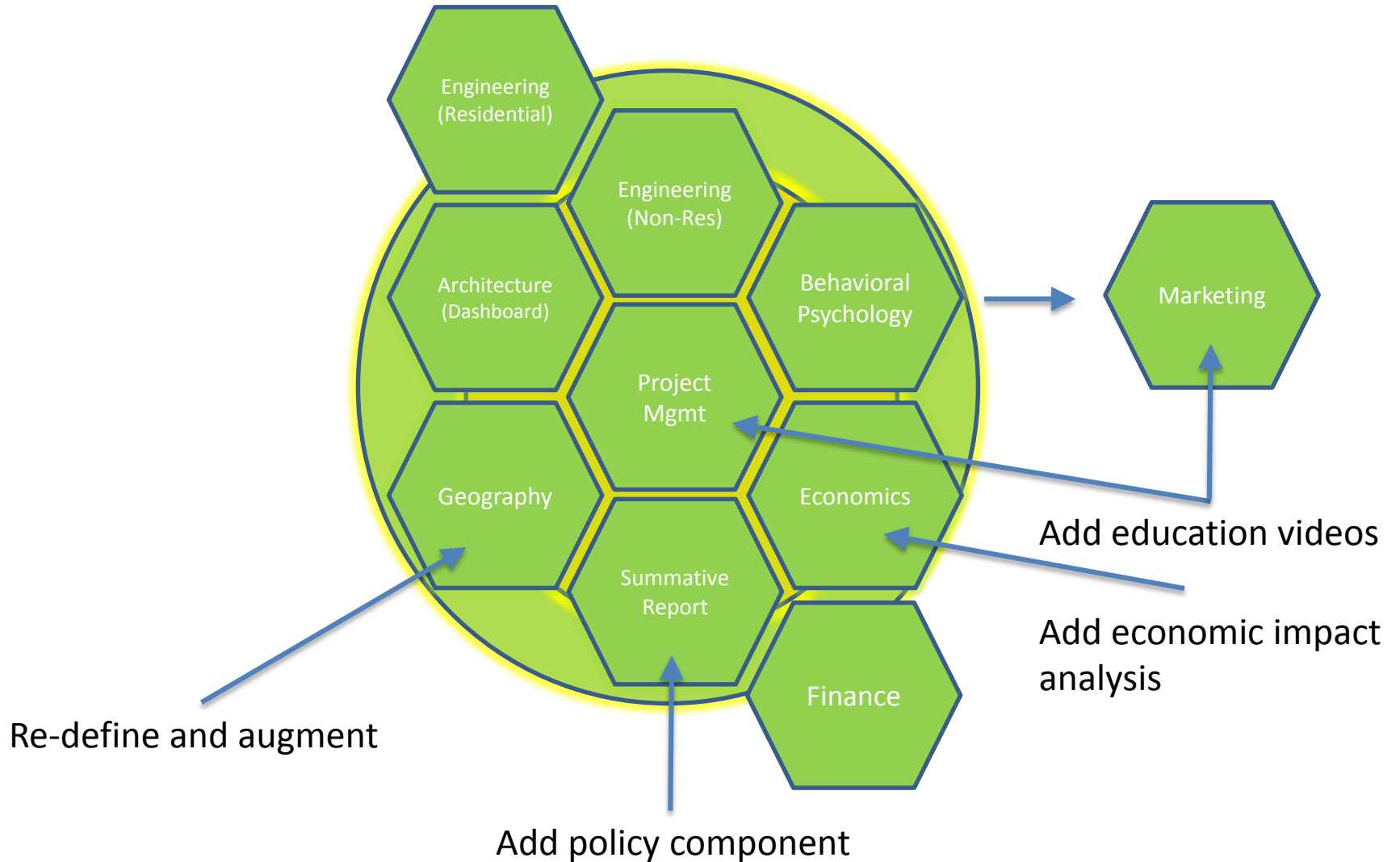


# Multiple ASU Roles

1. Institutional partner that substantially drove the grant proposal
2. “Third-party” program evaluator
3. Contractual sub-awardee to the City of Phoenix on a U.S. federal grant.



# Evolving Scope & Team



# Socio-Behavioral Factors Rule

1. Individual behavior (social norms)
2. Business and contracting norms
3. Inter- and intra-institutional culture
4. Public policy



# Operationalizing the research agenda

**What:** Orient to stakeholder needs

**Impacts:**

1. Stakeholder relevance / “buy-in”
2. Researcher tentativeness
3. Institutional partner relationships



# Engaging Contractors in Evaluation Process

**What:** Quid pro quo

**Impacts:**

1. Much larger data set
2. Results to those who can most use it



# Engaging Non-Profits

**What:** 25 meetings with diverse groups

## **Impacts:**

1. Landmine avoidance
2. Program/messaging improvements
3. Enlist program evangelists
4. Culture change at City



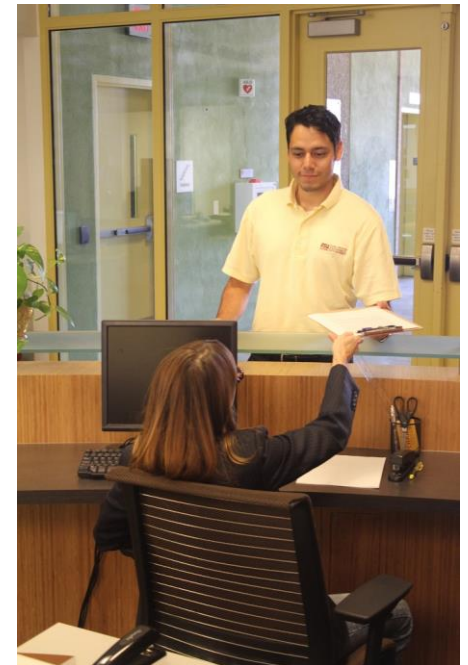
*Rogue Green*

# Leveraging Community Surveyors

**What:** Communicate program after surveying and track survey process

## **Impacts:**

1. Build goodwill
2. Change of attire
3. Reduce wariness / skepticism
4. Spanish media intensified
5. Single family rental program



# Dashboard Lessons

**What:** Field experiment with challenges



## **Impacts:**

1. Revealed real estate status
2. Insight into illiteracy
3. Education change
4. Tech influence on results



# Engaged Evaluation Report Process

**What:** Involve stakeholders extensively in report editing process

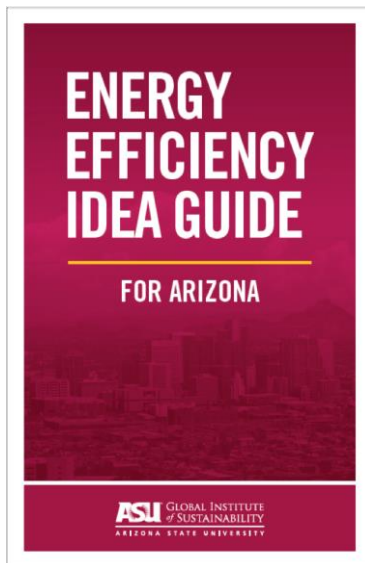
## **Impacts:**

1. Contractor insight into results
2. Pave the political landscape
3. Tension with partners
4. Change to utility program
5. Better report



# The Trade-Offs of Multiple, Engaged Roles

- Role versatility
- Timely program feedback
- Input vs. Authority
- Opacity of role
- Evaluator objectivity

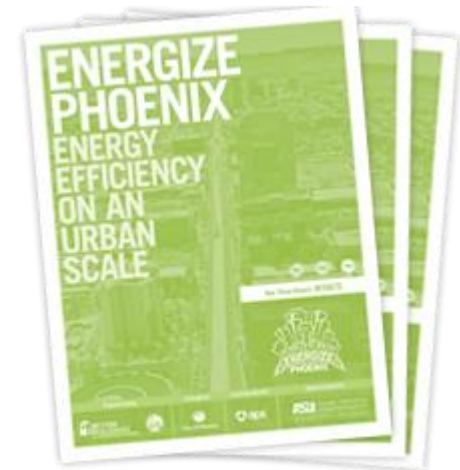


# Recommendations for Evaluators

- Make roles clear
- Create independence from administrator
- Signal intent and follow through
- Involve stakeholders in evaluation design
- Involve stakeholders in evaluation review
- Understand influencers and enlist
- Add value / Be helpful
- Listen and communicate. Repeat

# Thank you!

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**ASU** Walton Sustainability  
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