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**Honeywell**  
**Comprehensive Municipal Services**

**Honeywell**

## Honeywell Corporate Profile

A Fortune 100 company  
(\$37B in sales)

“2008 Green Technology  
Company of the Year”  
- Frost and Sullivan

128,000 employees in  
nearly 100 countries

“We are building a world that’s safer and more secure, more comfortable and energy efficient, more innovative and productive.

**We are Honeywell”**

“One of the Best  
Managed Companies,  
and the World’s Number  
One Diversified  
Technology Company”-  
Forbes Magazine



**David M. Cote**  
*Chairman and CEO*

Five Ohio Offices –  
**Columbus, Fairborn,  
Cincinnati, Toledo, and  
Cleveland**

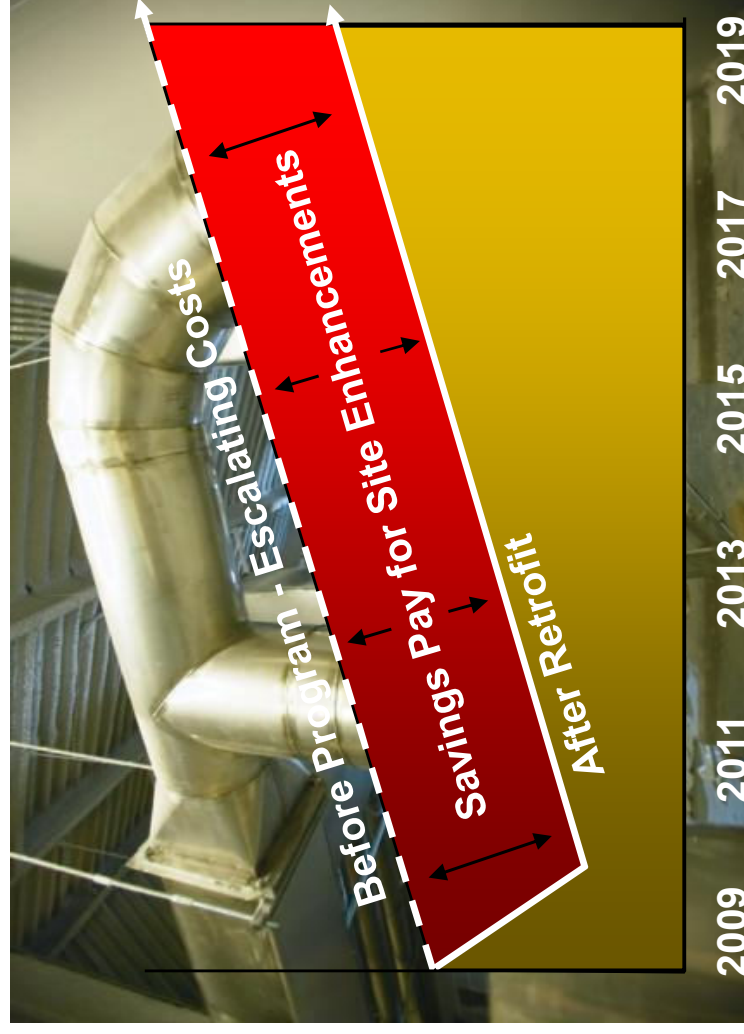
# Municipal Objectives

- 1 Capital Infrastructure Renewal**
- 2 Deferred Maintenance Issues**
- 3 Escalating and Volatile Energy Costs**

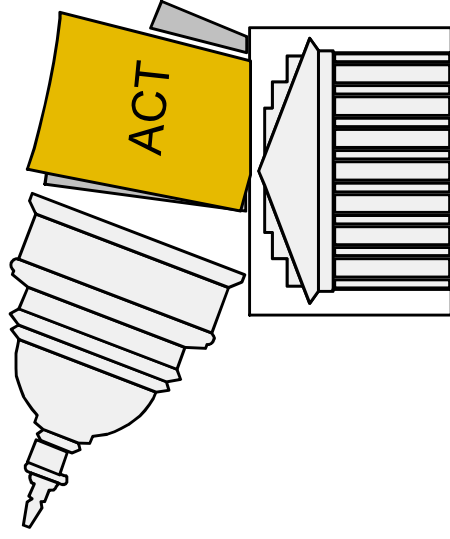
## Infrastructure Renewal

### *What is Performance Based Contracting?*

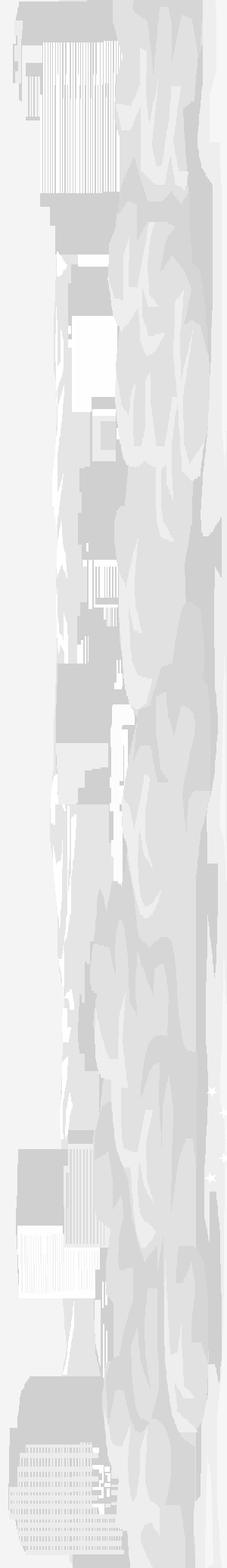
A comprehensive  
**“self-funded”** program  
where the equipment and  
technology that Honeywell  
installs to modernize  
buildings and facilities is  
**paid for by guaranteed  
energy and operational  
savings.**



# Local Government Energy Conservation Act



- Ohio House Bill 300 and 420, ORC 717.02
- Encourages local governments to reduce energy and operating costs.
- Allows for procurement through Performance Contracting approach.
- Debt incurred not included in calculation of net indebtedness.
- Self-funded over average equipment life.



# Financing and Funding Mechanisms

- ARRA Stimulus Funds
  - Energy Efficiency Community Block Grants (EECBG)
  - Broadband Grants
  - AMR Grants
- Financing Options
  - Third Party
  - State Rebates
  - Expanded Clean Renewable Energy Bonds (CREB)
  - New Qualified Energy Conservation Bonds

# Energy Conservation Measures

- Building Envelope
- HVAC Controls
- HVAC Equipment
- Lighting Systems
- Cogeneration
- Central Plants
- AMR/AMI
- Traffic Signals
- Renewable Energy
- Rate Switch



**Typical Savings 10-30%**

# Renewable Energy Scorecard

**Dayton, Ohio**

**Energy: Conventional**

Electric	\$87.40 MWh
Gas	\$12.85 MMBTU
Oil	\$16.82 MMBTU

**Local Attributes**

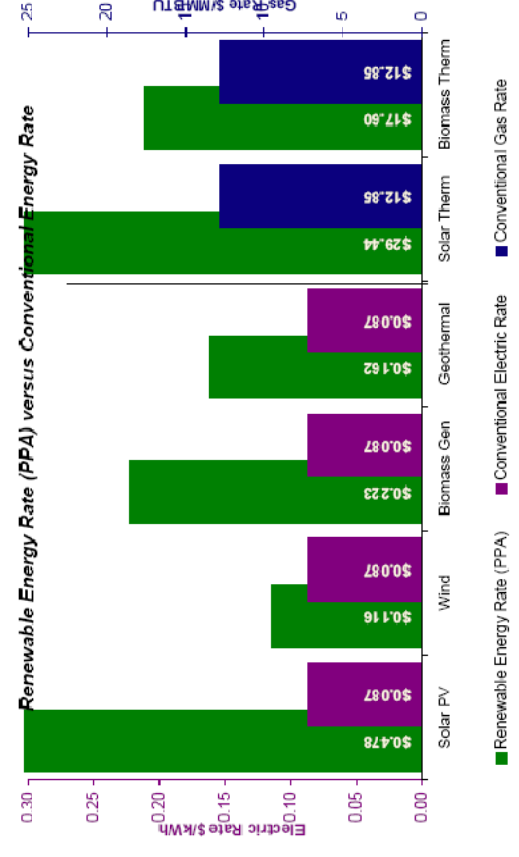
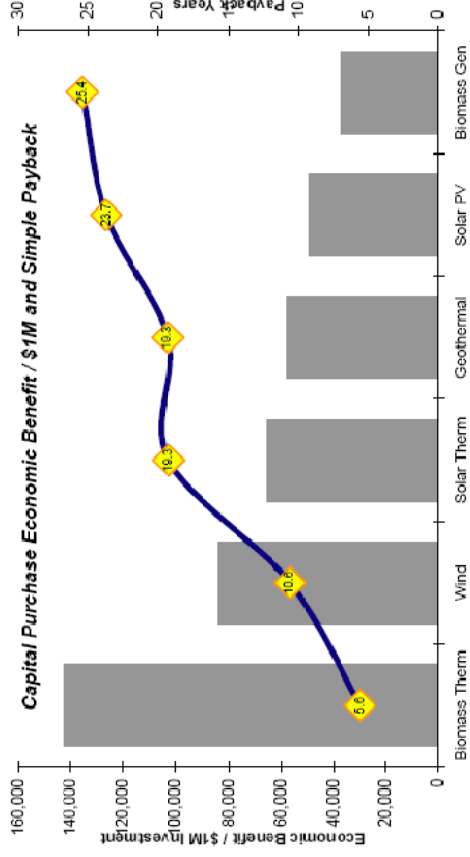
Heating Degree Days	5,731 HDD °F
Cooling Degree Days	842 CDD °F
Ave. Air Temp.	50.2 °F
State Rebates	YES
Federal Rebates	YES

**Energy: Renewable**

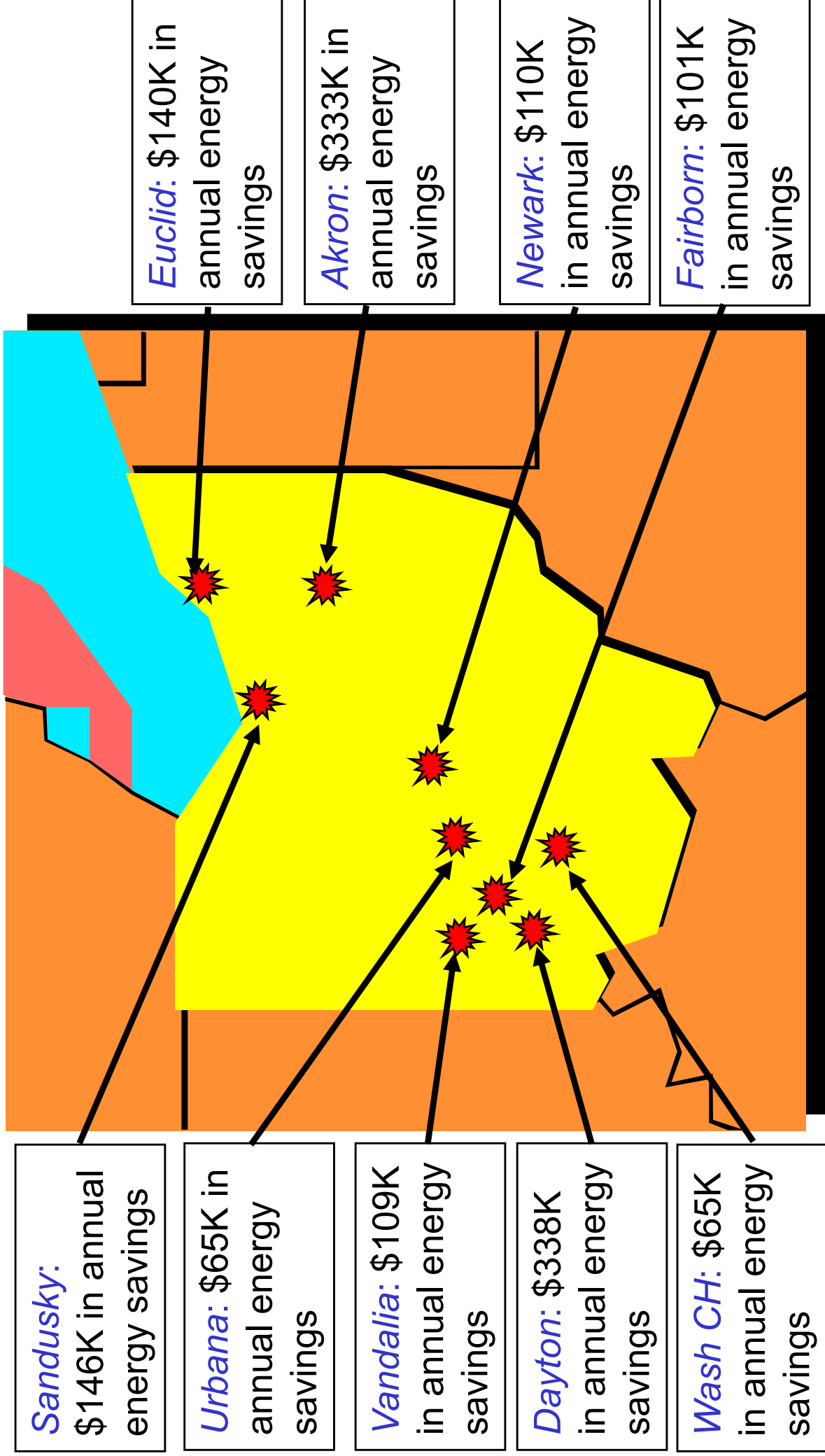
Wind	5.9 Meters / Second
Biomass	308.5 Tons / Mile <sup>2</sup>
Solar	4.2 Daily kWh / Meter <sup>2</sup>
Geothermal	9.0 Mean Earth °C

**Renewable Resource Potential**

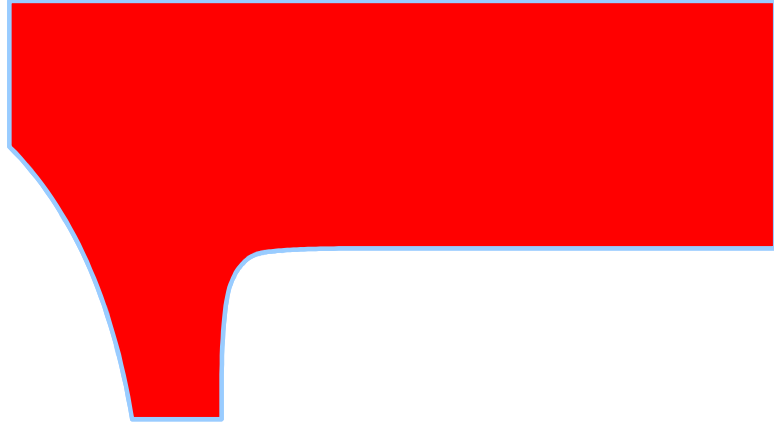
Resource	Potential
Solar	High
Wind	Moderate
Biomass	High
GeoThermal	Moderate



## Sample of Energy Projects



# AMR Deployment



- Approach AMR using Performance Contracting Methods
- Complete System Evaluation
- Meter Installation
- Ongoing Performance and Service
- Wireless Broadband Backhaul
- Total Solution Coordination

# AMR Performance Contracting Approach

## Water AMR

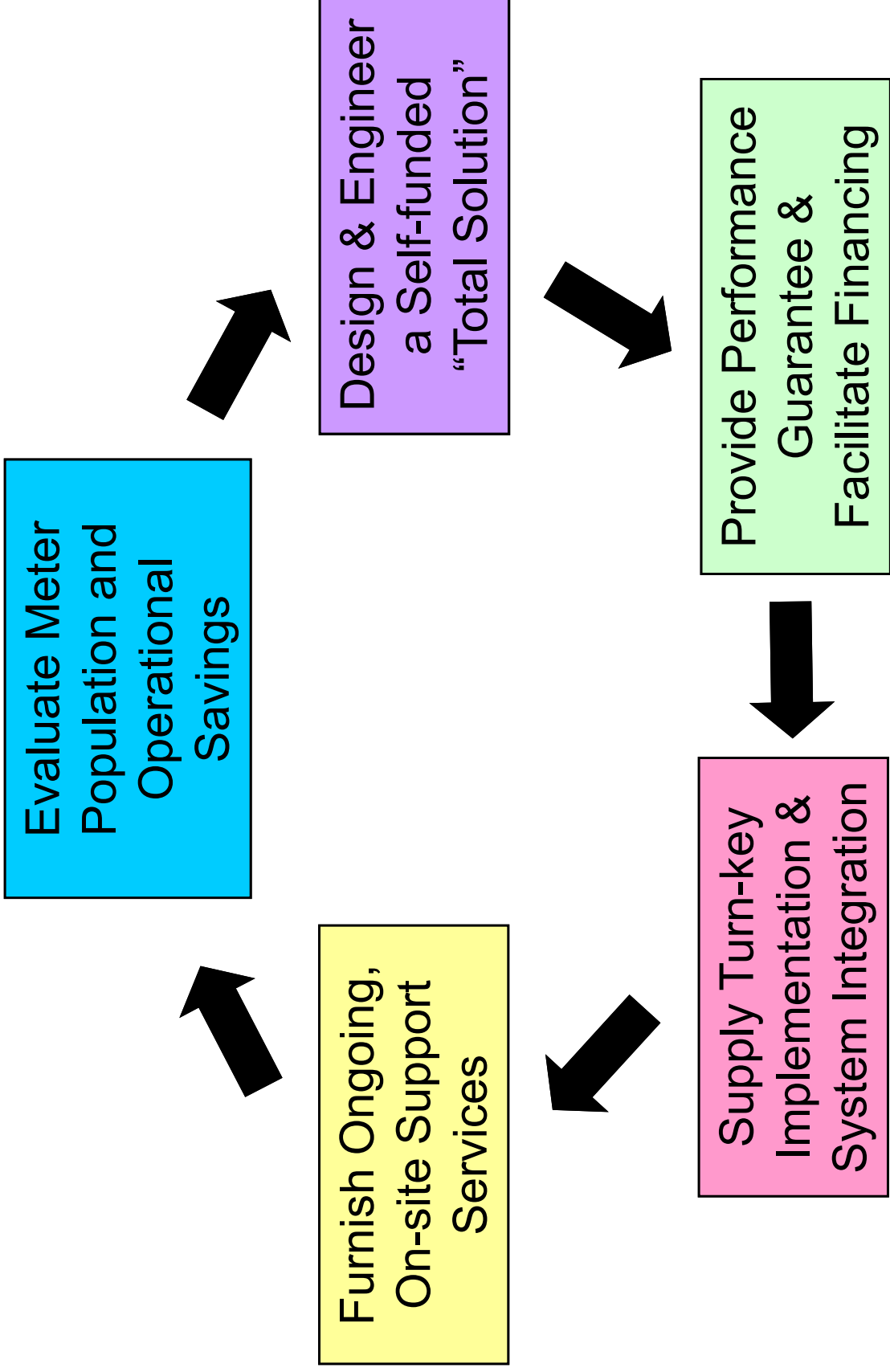
<u>Customer</u>	<u># Meters</u>
Akron, OH	78,500
Augusta, GA	7,000
JEA – FL	240,000
Boston, MA	88,000
Houston, TX	80,000
Elizabeth, NJ	10,000
Aquasource – TX	10,000

## Electric & Gas AMR

<u>Customer</u>	<u># Meters</u>
JEA - FL	380,000
Xcel Energy - MN	860,000
Ameren UE - MO	720,000
KCP&L – KS	208,000
ONG – OK	30,000
Xcel (battery) – MN	200,000
Austin Energy – TX	65,000

**Over 175 Honeywell employees dedicated to meter services**

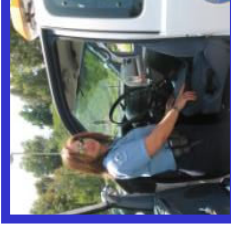
## AMR Development Process



## Broadband Enabled Wireless Solutions



Utility  
Management



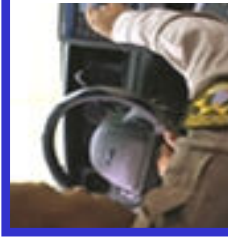
City Operations



Transportation  
Systems



Community Internet



Public Safety



Parking Management

Tropos Wireless IP Broadband Networks  
Support One...or Many Applications

## **Increasing Public Safety Efficiencies, Improving Quality Of Life**

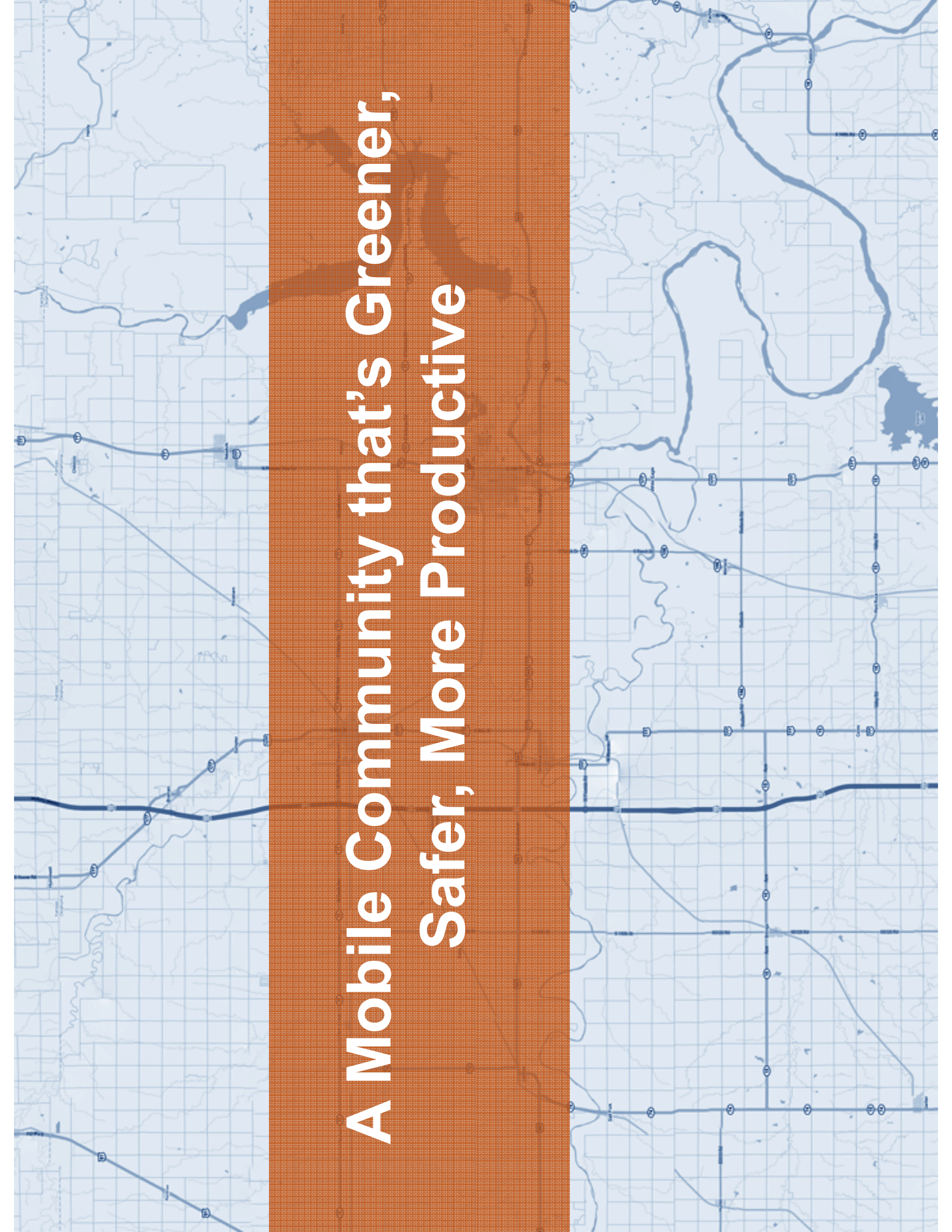
- Police have real-time access to online data, live video for the first time
- Improved city operational efficiencies
- Lower vehicle emissions
- Increased educational opportunities and economic development

## **Solutions**

- Public Safety
- City Operations
- Internet Access

A map of Ponca City, Oklahoma, with a blue circle highlighting the city center. The map shows major roads, a river, and surrounding areas. A blue box with a white border contains the text "Ponca City, Oklahoma".

**Ponca City,  
Oklahoma**



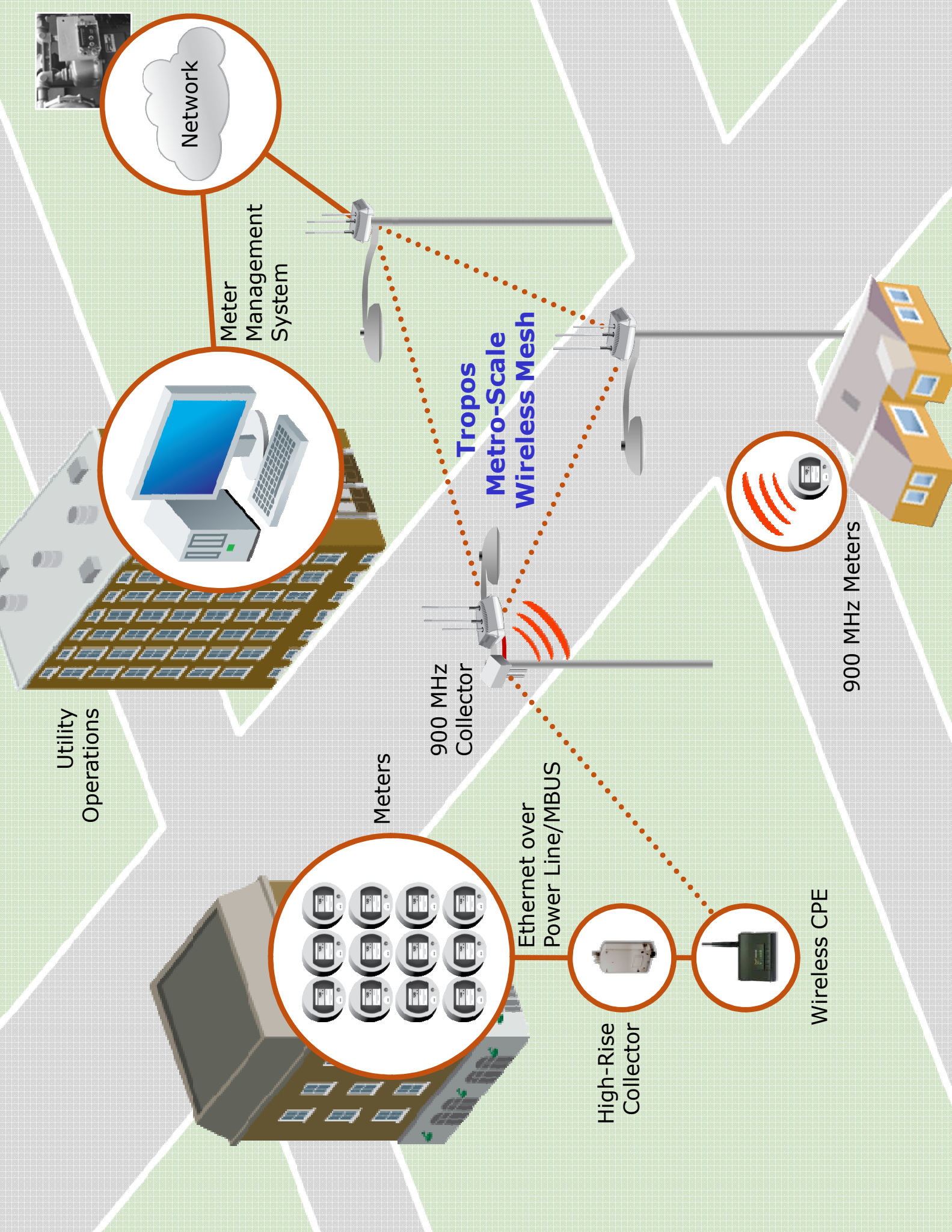
# A Mobile Community that's Greener, Safer, More Productive

## Ponca City Mayor

- “Seventy-five percent of the city staff perform duties outside an office. So this network is an important productivity tool for our employees. And the **enhanced communications mean improved safety and services** for our residents, and recued costs for the city.”

# Question & Answers

**Thank You!**



Network

Meter Management System

Tropos Metro-Scale Wireless Mesh

900 MHz Meters

900 MHz Collector

Meters

Ethernet over Power Line/MBUS

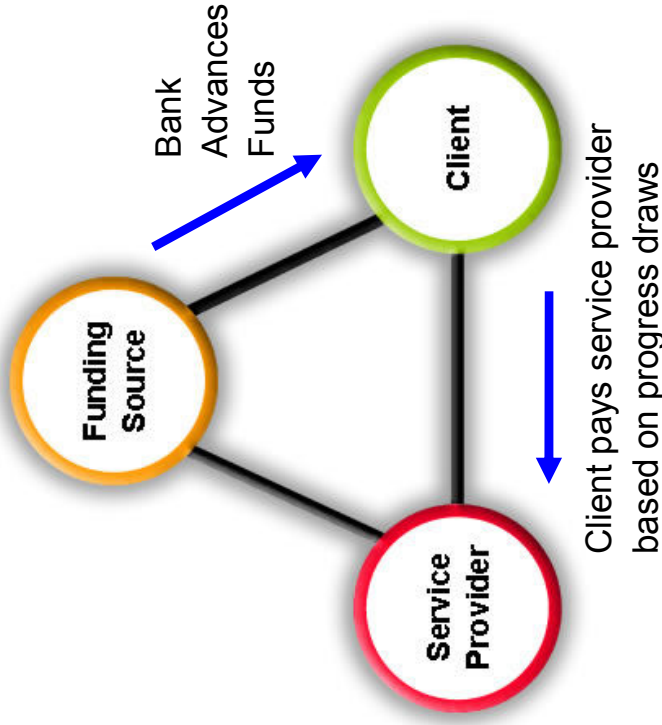
High-Rise Collector

Wireless CPE

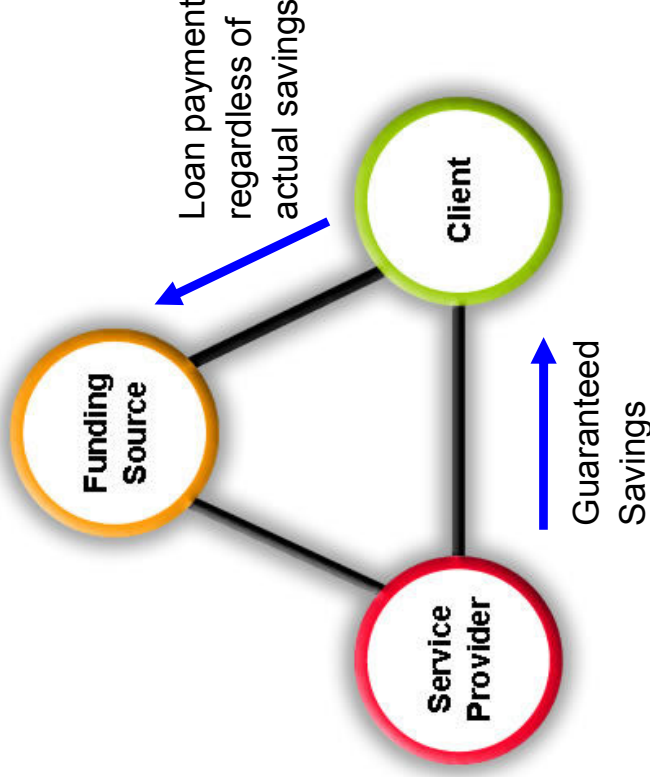
Utility Operations

## Funding and Guarantee Mechanism

### During Project Construction



### During Performance Period



Structured so guaranteed savings stream funds payment obligation

Reduced Risk

## Measurement & Verification (M&V)

- Determines the success of the installation.
- Compares pre-retrofit energy consumption with post-retrofit energy consumption.
- Creates a joint plan with the customer.
- Based on Federal and International Standards.
- Annual reconciliation of guaranteed savings.

## Project Management Process



### Pre-Project

Experienced project managers help you anticipate issues

Seasoned planners provide reliable project milestones



### Post-Project

Provide an ongoing M&V Program

Help you assess the ongoing impact/outcome

Provide valuable post-project training for your teams



### During the Project

Know-how to implement projects in an occupied facility

Honeywell's buying power reduces costs within your own processes

Reliably meet project deadlines via project management systems

# Implementation Plan

- 1. Benchmarking Facilities**
- 2. Determine Viability of Ohio House Bill 300**
- 3. Presentation to Administrative Team**
- 4. Presentation to Council**
- 5. Detailed Engineering Process**
- 6. Complete HB300 Detailed Engineering Report**
- 7. Administrative Presentation of Project**
- 8. Council Approval of Implementation**
- 9. Contracts Signed**
- 10. Financing Secured**
- 11. Implementation**
- 12. Measurement and Verification**

