

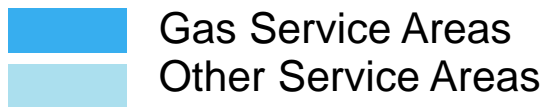
Natural Gas Leak Detection and Prevention

Rick Trieste

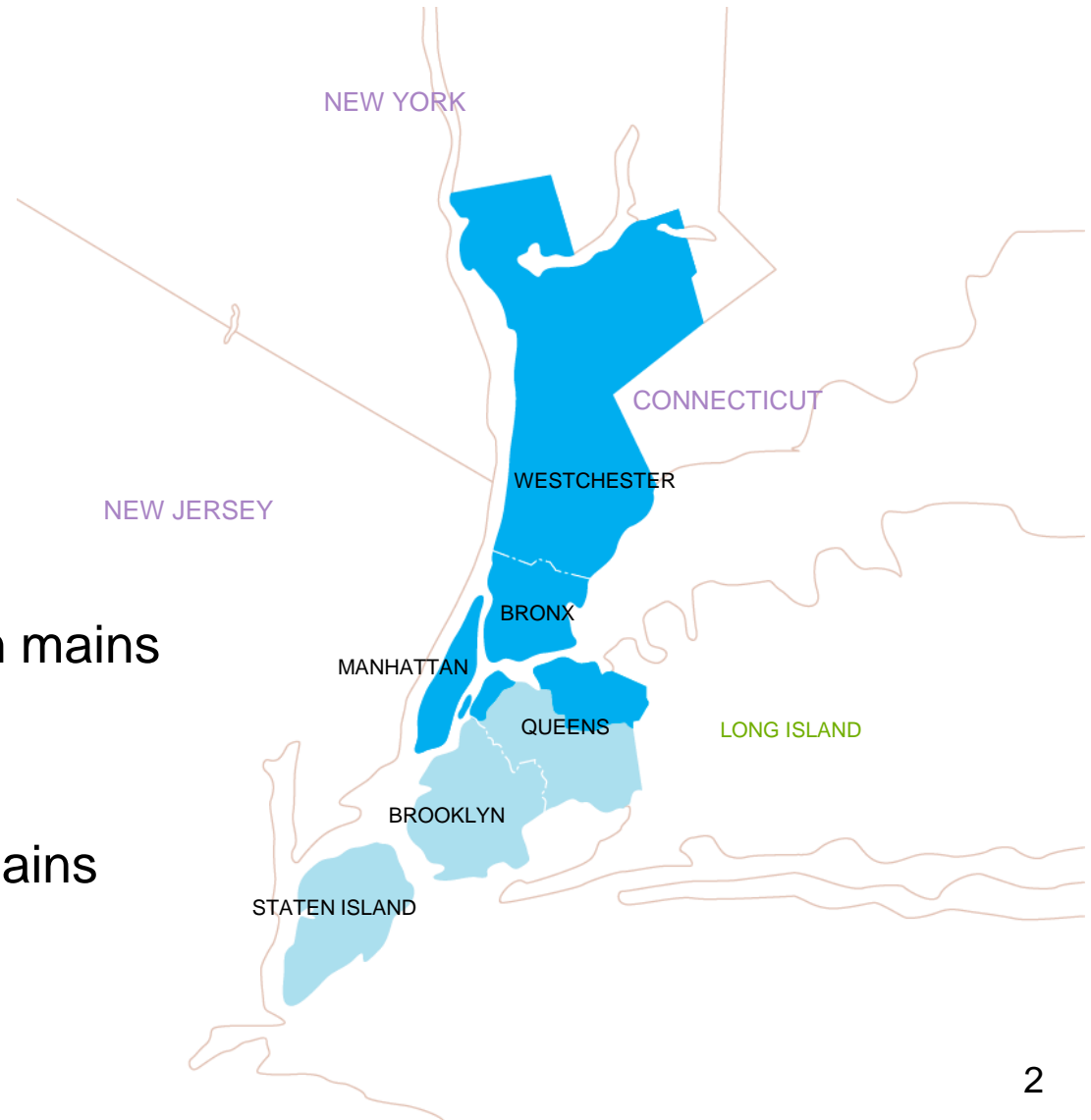
Department Manager - Research, Development &
Demonstration

Consolidated Edison Company of New York

CECONY Gas Franchise



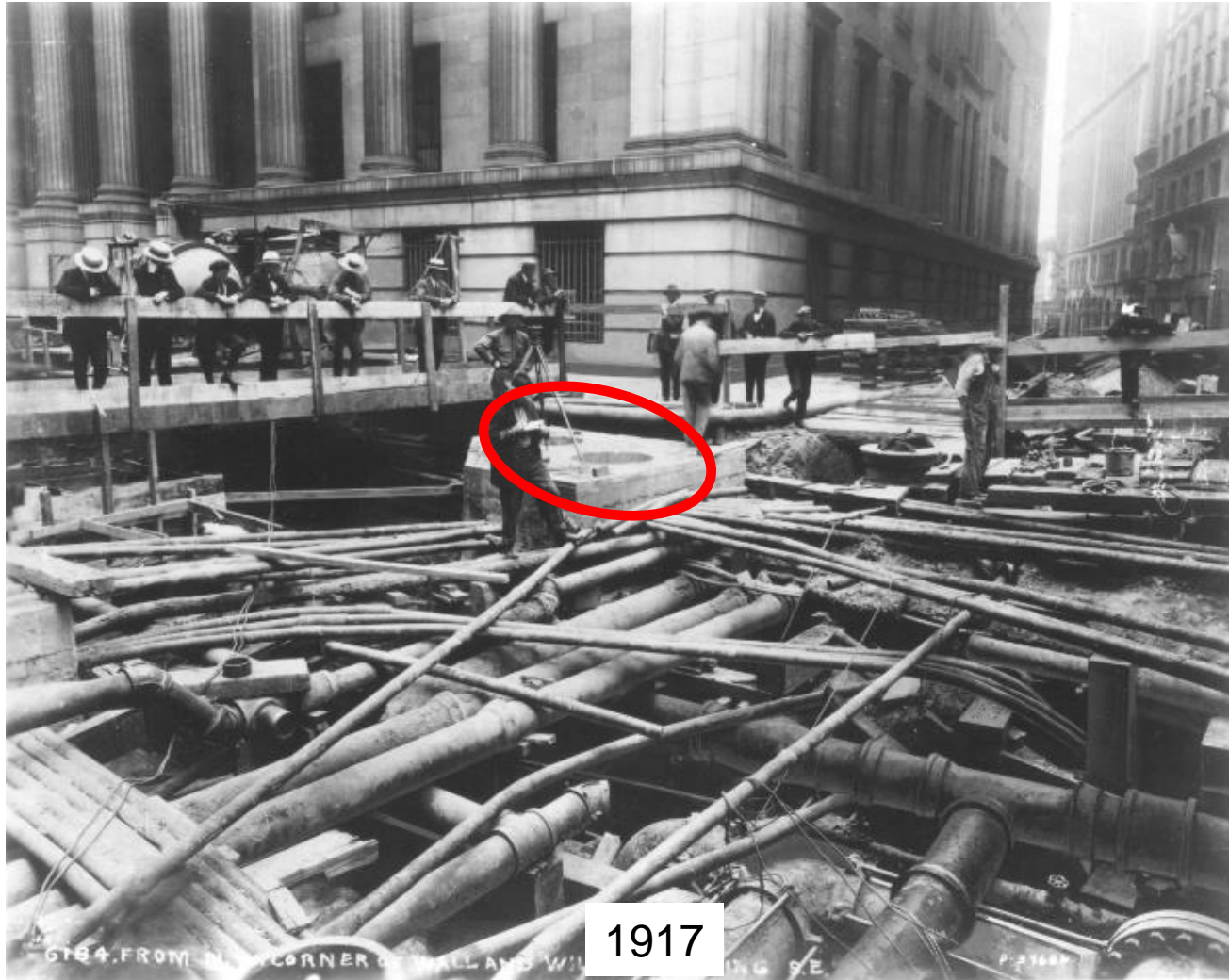
- 1.1 M customers
- ~4,400 miles of distribution mains
- ~375,000 services
- 94 miles of transmission mains



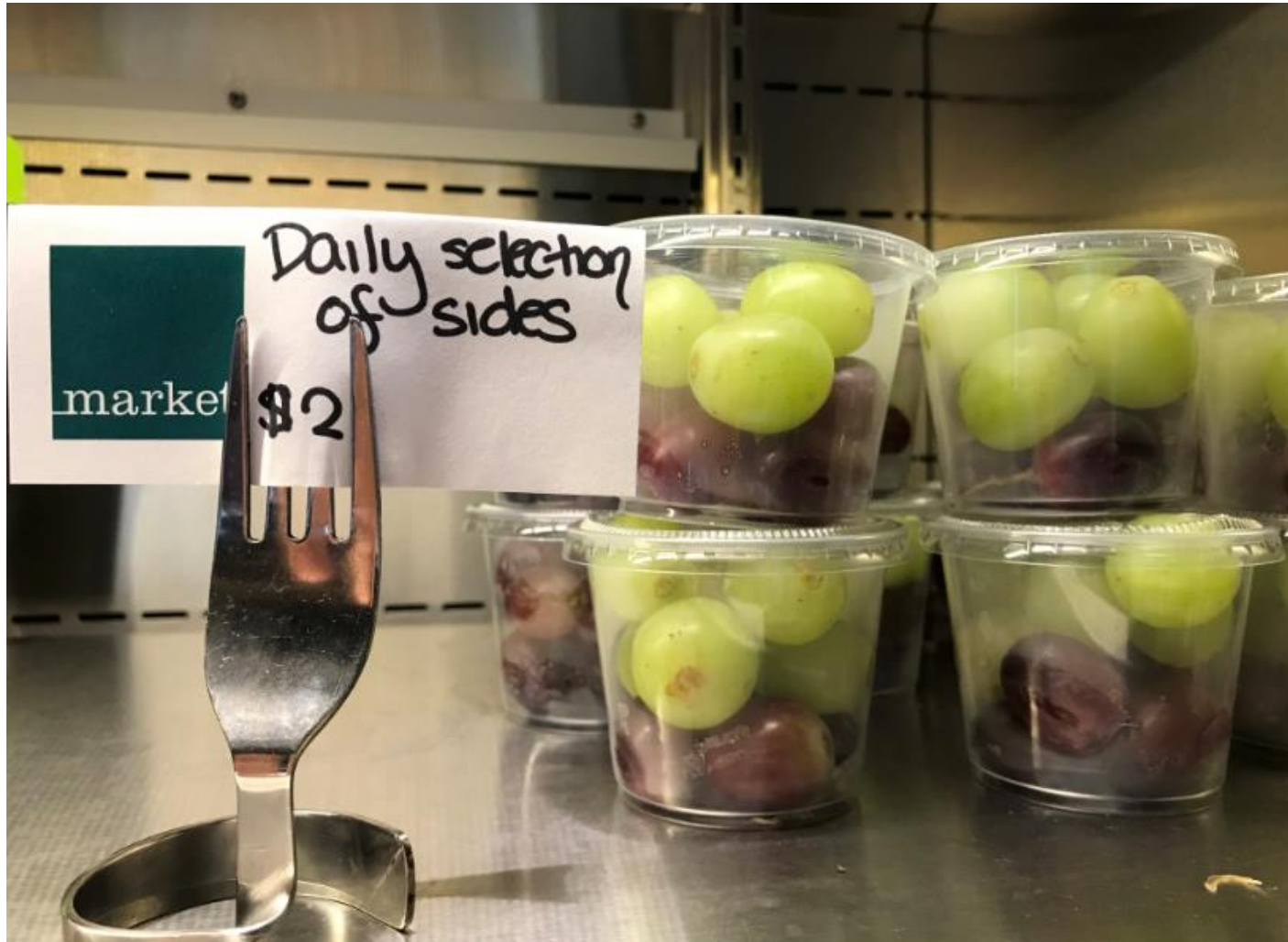
Application of Technology In Urban Environments Pose Challenges



Application of Technology In Urban Environments Pose Challenges



Project Goals and Objectives Need to be Realistic



Gas Leak Management Requires Multi-Faceted Approach

Prevention

Efforts:

- Main replacement program leak prone pipe
- One-call, Dig safe
- Work coordination with city utilities

Detection

Efforts:

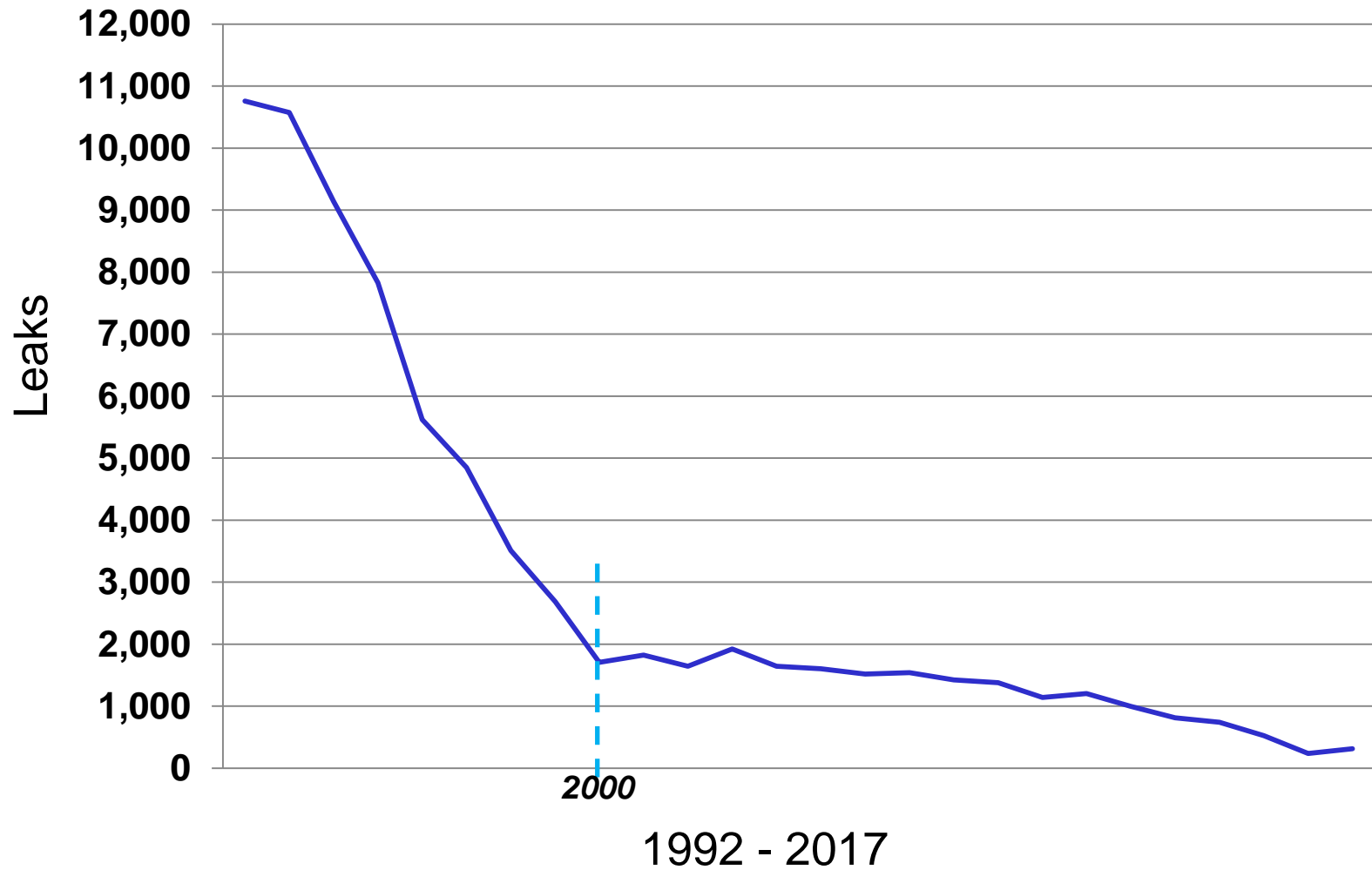
- *Monthly* mobile leak survey
- Public awareness campaigns
- Residential methane detectors development and deployment

Response

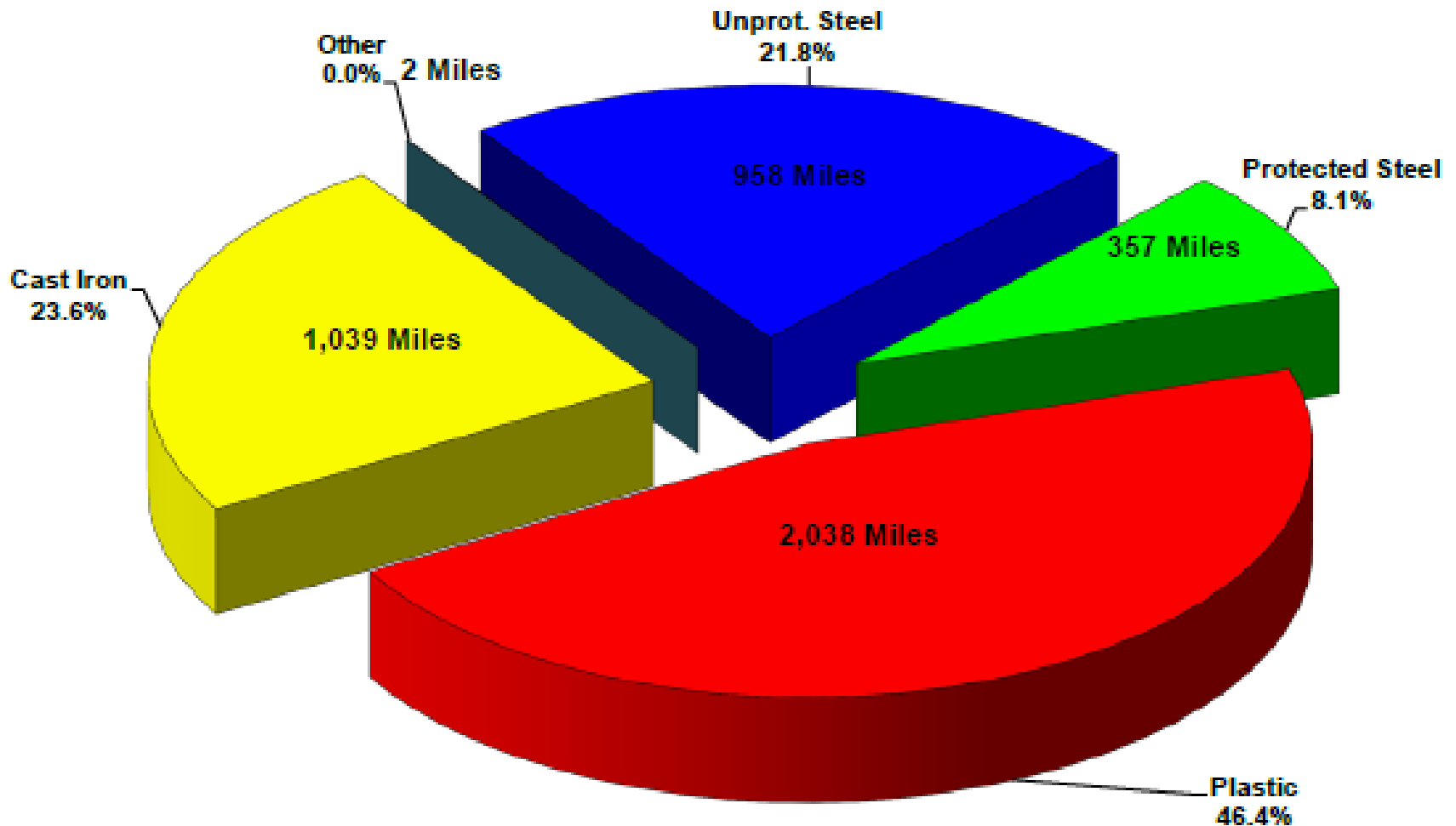
Efforts:

- Code MuRRE
- Isolation valve installation program
- Repair Type 3 leaks

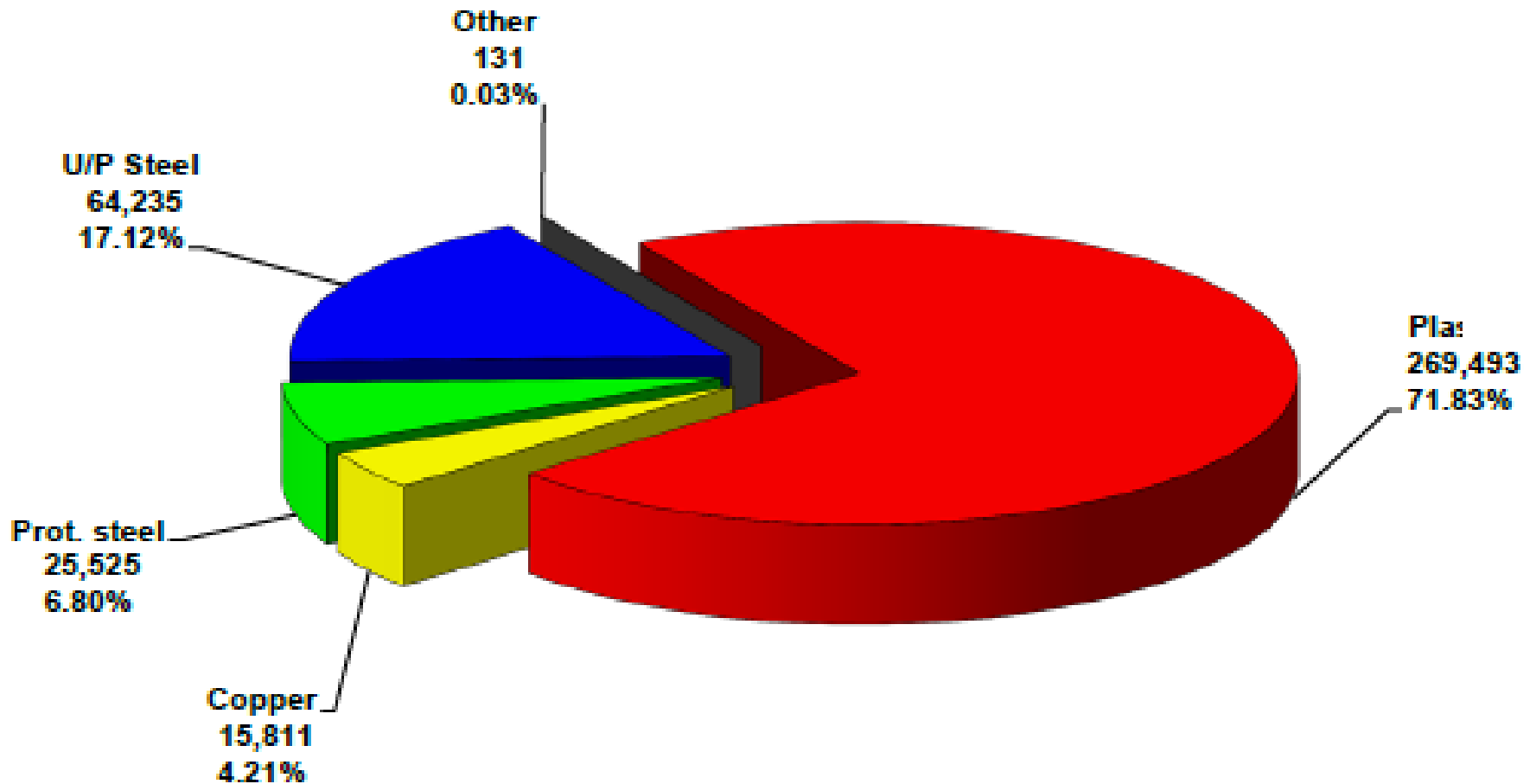
Response: Gas Leak Backlog Management



Prevention: Main Replacement Program



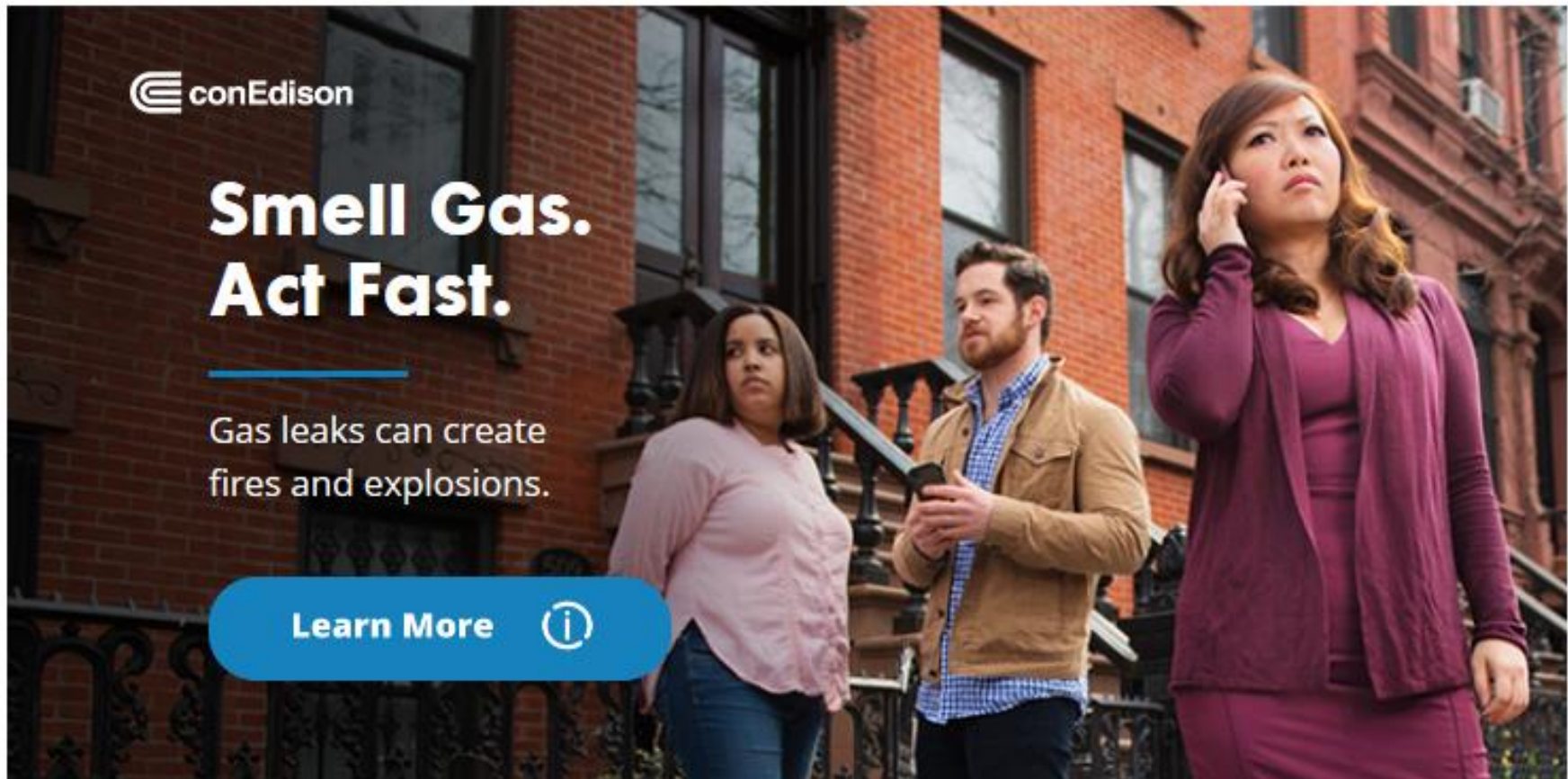
Prevention: Service Replacement Program



Detection: Public Awareness Campaigns

Don't assume someone else will make the call.

[View Online](#)

A public awareness campaign graphic for conEdison. The background is a photograph of three people standing in front of a brick building. A woman on the right is talking on a mobile phone, looking concerned. A man in the middle is looking at his phone. A woman on the left is looking towards the camera with a serious expression. The conEdison logo is in the top left. The main text reads 'Smell Gas. Act Fast.' followed by a horizontal line and the text 'Gas leaks can create fires and explosions.' At the bottom, there is a blue button with the text 'Learn More' and an information icon (i in a circle).

conEdison

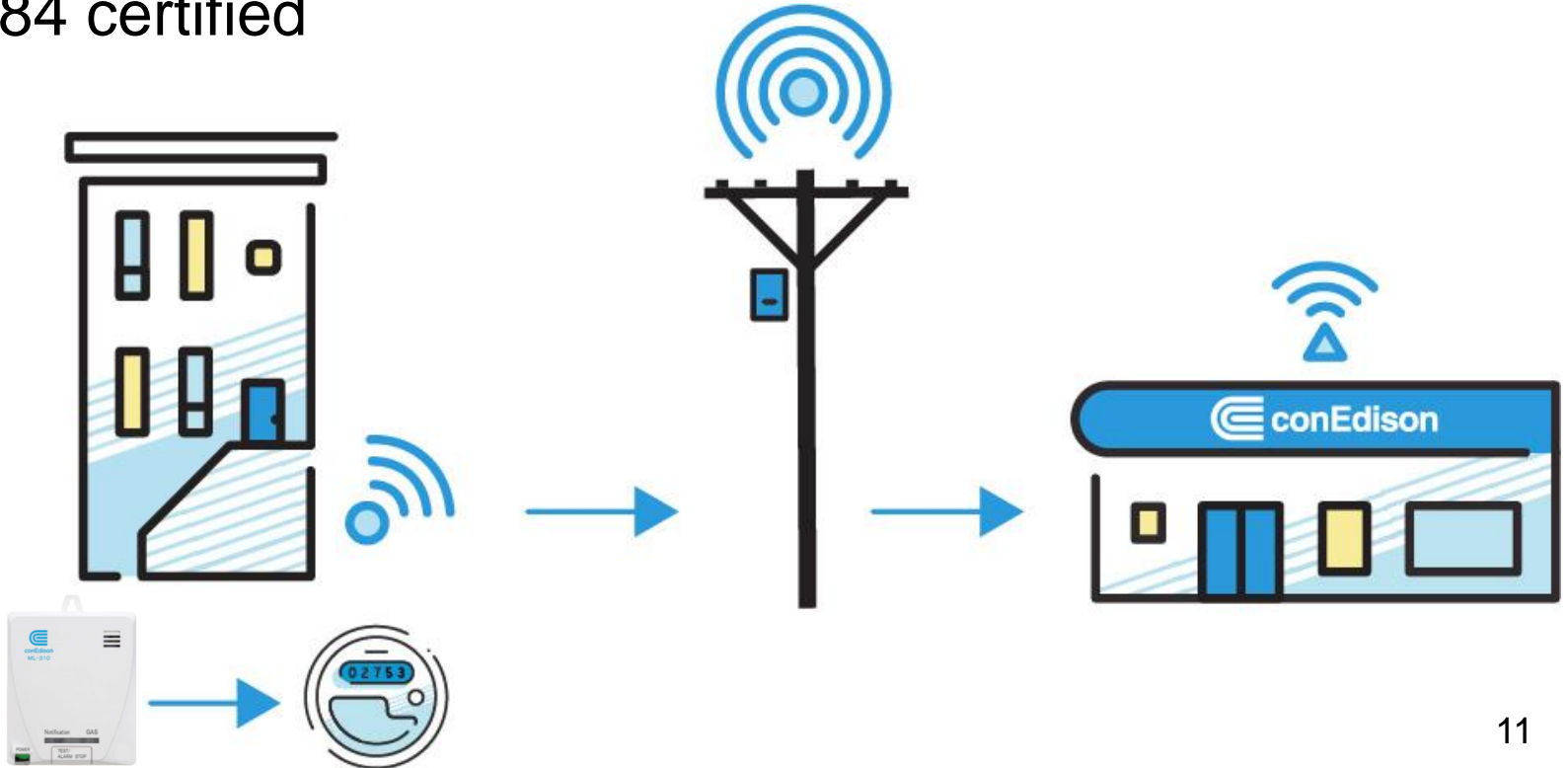
Smell Gas. Act Fast.

Gas leaks can create
fires and explosions.


Learn More ⓘ

Detection: Residential Natural Gas Detector – New Cosmos


- Battery powered - 5 yrs.
- Tested by GTI
- UL 1484 certified
- 10% LEL alarm (0.5% gas-in-air)
- Device Company owned



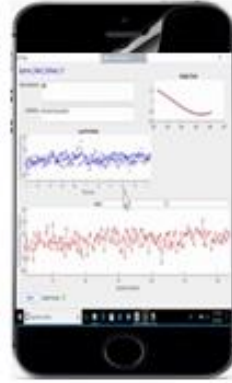
Detection: Residential Natural Gas Detector – Sparrow Detect

 THE FUTURE OF GAS DETECTION
for
Every Home, Every Building, Everywhere

Natural Gas Detection



6" x 6" x 1½"



Applications

Detection: Residential Natural Gas Detectors– Sparrow Detect



It's about Safety, Services & the Environment

ONLY Sparrow provides:

THE EARLIEST WARNING

Rate of Change and Time Trending Detection
Ability to detect gas at very low levels
Unparalleled performance

NO FALSE POSITIVES

Intelligent Risk Assessment
Ability to detect common contaminants
Molecular specificity

“KNOWN” DEVICE STATUS

Built in diagnostics
Status available on demand

FREE RUNNING

Self monitoring and correcting

LARGEST COVERAGE AREA

1 Sparrow protects single story home

PREVENTATIVE

Early identification of leaks
More reliable than “odor calls”
Ability to turn off gas at smart meter

Detection: Leak Survey Enhancement Project with Colorado State University

- Mobile leak survey performed with Heath DP-IR
- Objective is to evaluate tools and process to seek improvements of mobile leak survey
 - Evaluate application of an anemometer
 - Operate an LGR in parallel to:
 - Optimize alarm set-point of DP-IR
 - Minimize false positives
- Evaluate leak investigation process once an indication warrants
- Evaluate use of hand-held devices to zero in on leak location

Detection: Advanced Leak Detection Technologies

- Picarro Surveyor
 - Areas clear of urban canyons
 - Pre-pave surveys
 - New construction quality control
 - Written procedures
- Project begun to evaluate ABB MobileGuard™

Methane Emissions Avoidance – ZEVAC, TPE Midstream



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