

# Running a Smart City

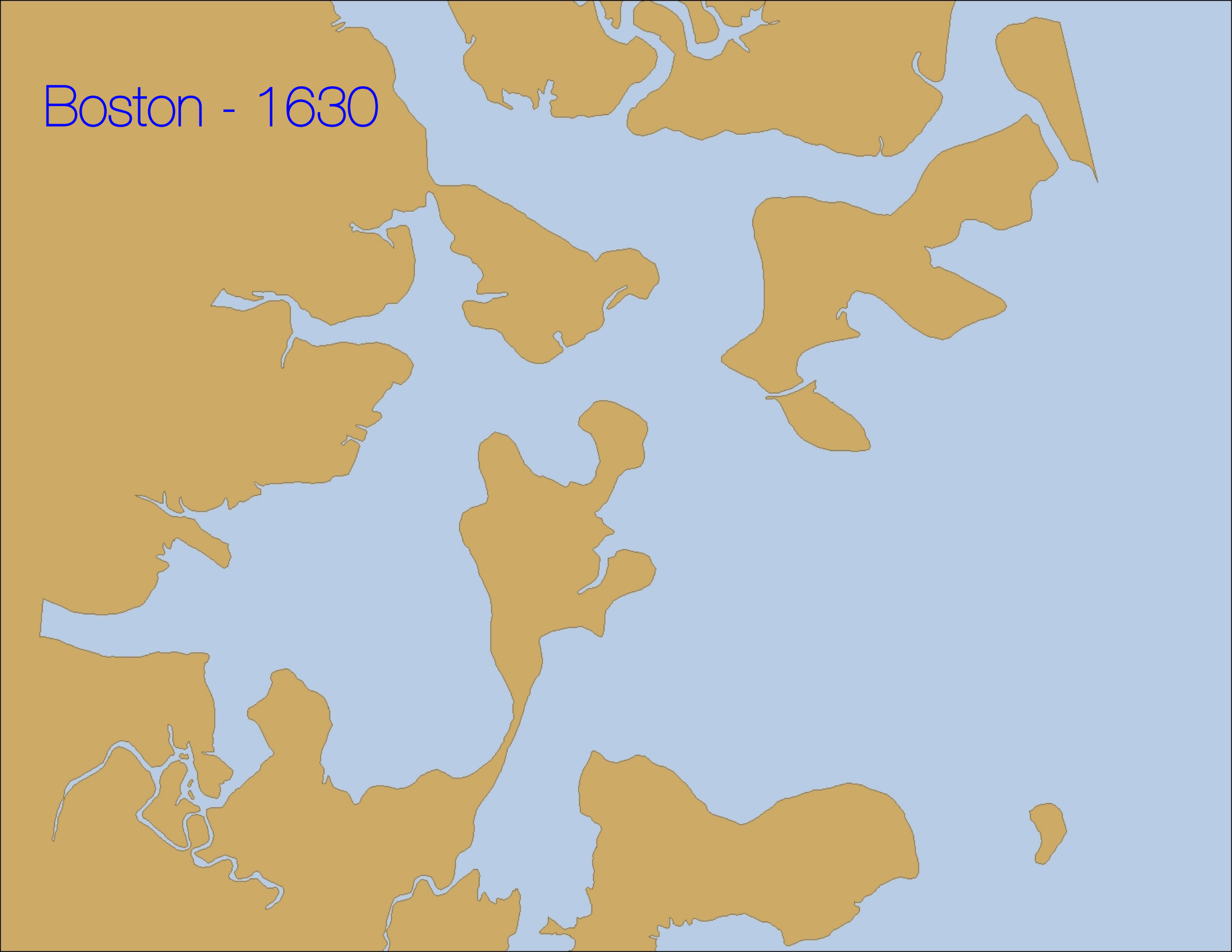
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City of Boston

Joseph LaRusso

Energy Efficiency & Distributed  
Generation Finance Manager  
City of Boston

Boston - 1630

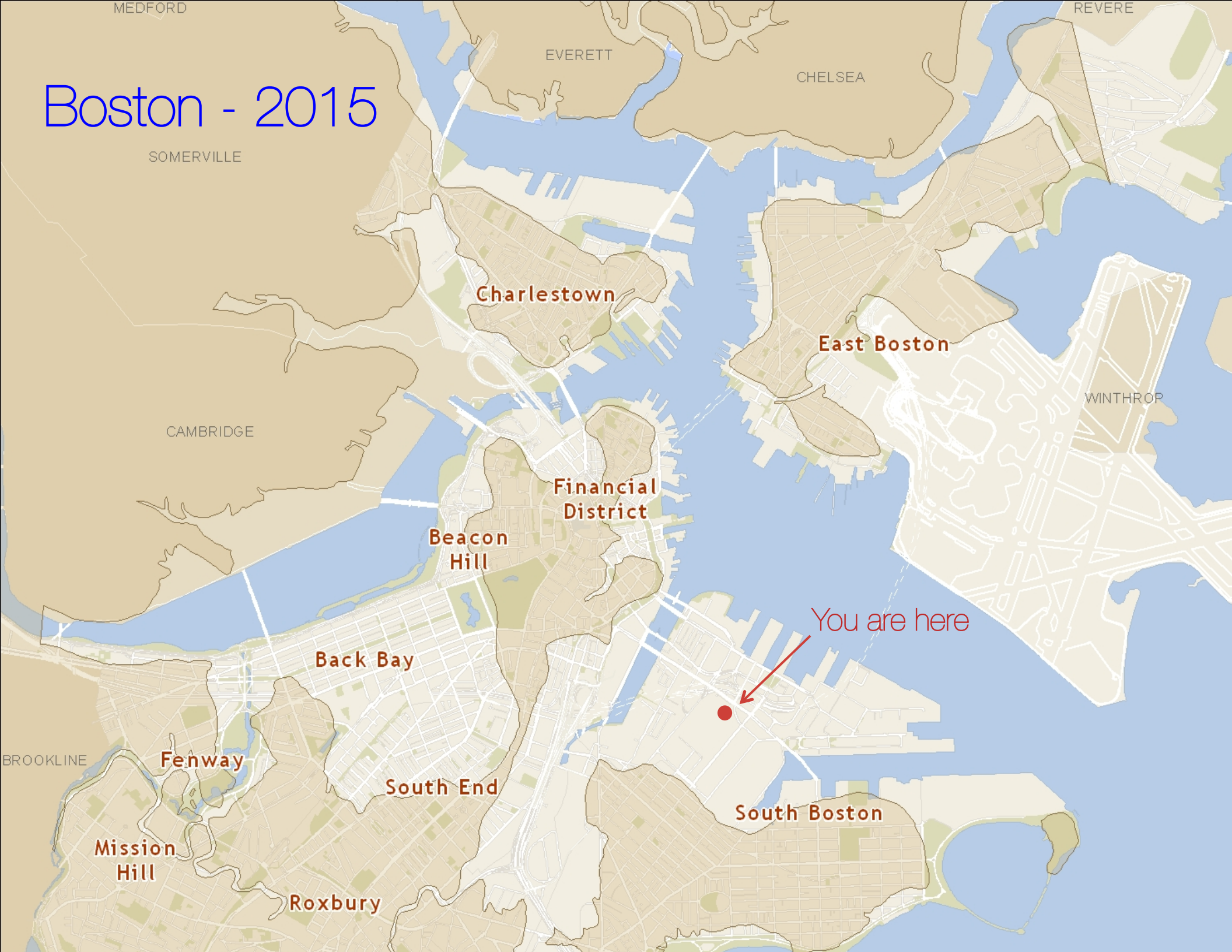


Boston - 1630

You will be here



# Boston - 2015



Charlestown

East Boston

Financial District

Beacon Hill

Back Bay

You are here

Fenway

South End

South Boston

Mission Hill

Roxbury

SOMERVILLE

EVERETT

CHELSEA

REVERE

CAMBRIDGE

WINTHROP

BROOKLINE

Boston - 2100



You were here

# April 13, 2007 “Executive Order Relative to Climate Action in Boston”

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- Reduce greenhouse gas emissions from government operations 7% below 1990 levels by 2012, 25% by 2020, 80% by 2050

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# Running a Smart City

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Devices

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## Devices



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- 3,461 Fire Alarm Boxes (FABs)



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- 50W/FAB



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- 8W/FAB:  
~125,000 kWh/year

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- 50W/FAB
- ~783,000 kWh/year
- 8W/FAB:  
~125,000 kWh/year
- = 60 single-family homes taken off grid

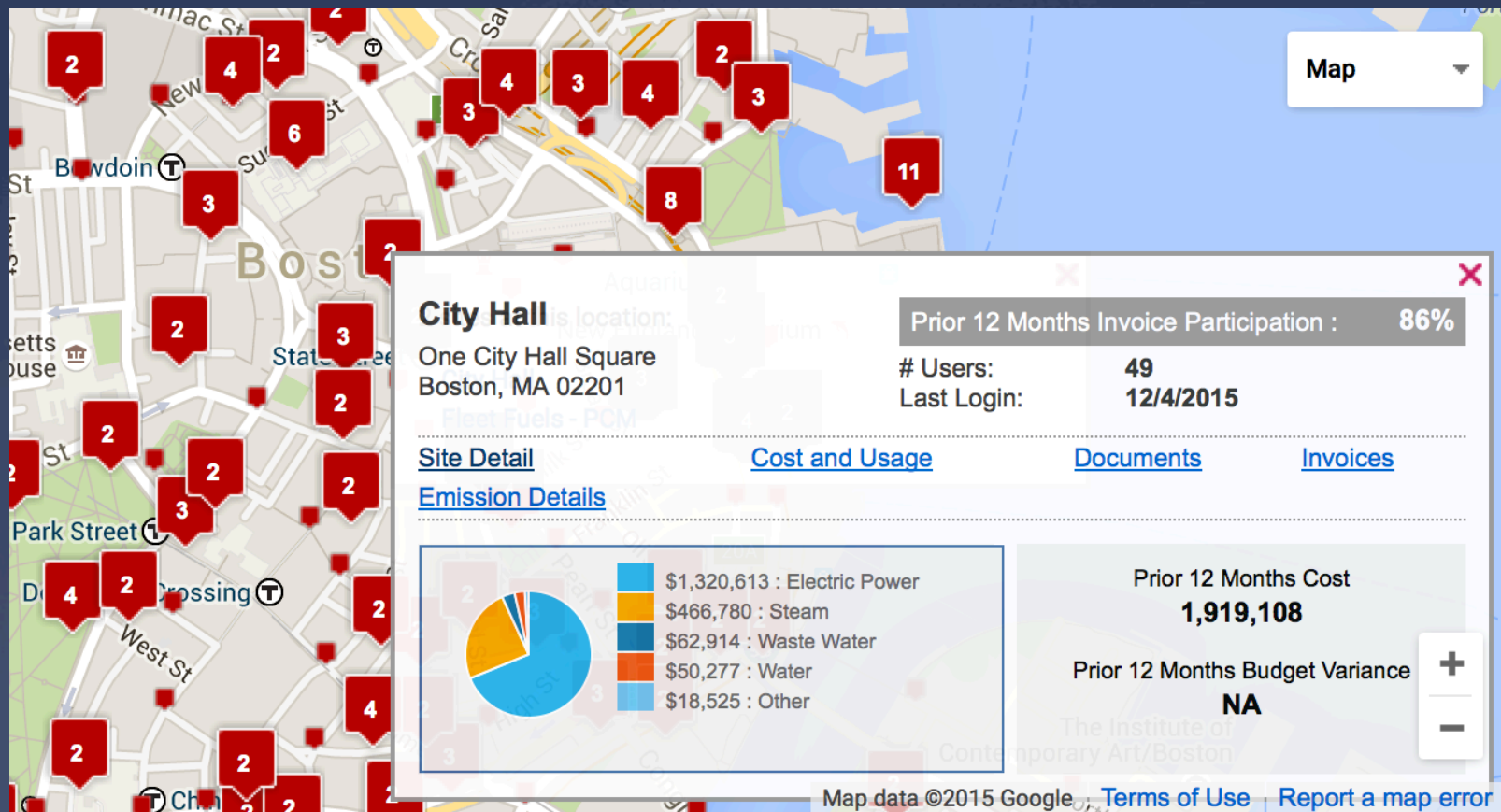
# Smarter Running a ~~Smart~~ City

Information Technology



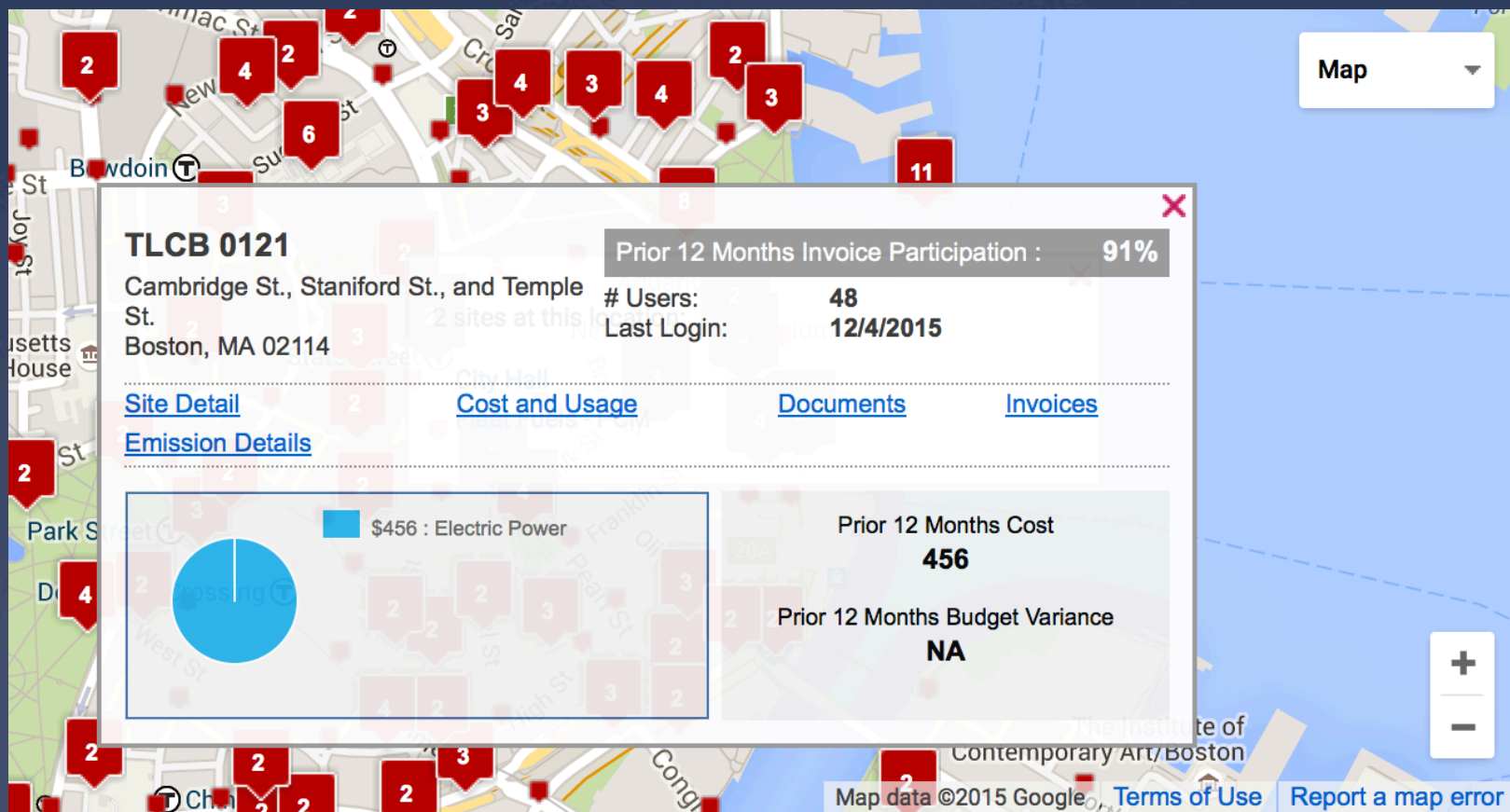
# Smarter Running a ~~Smart~~ City

## Information Technology



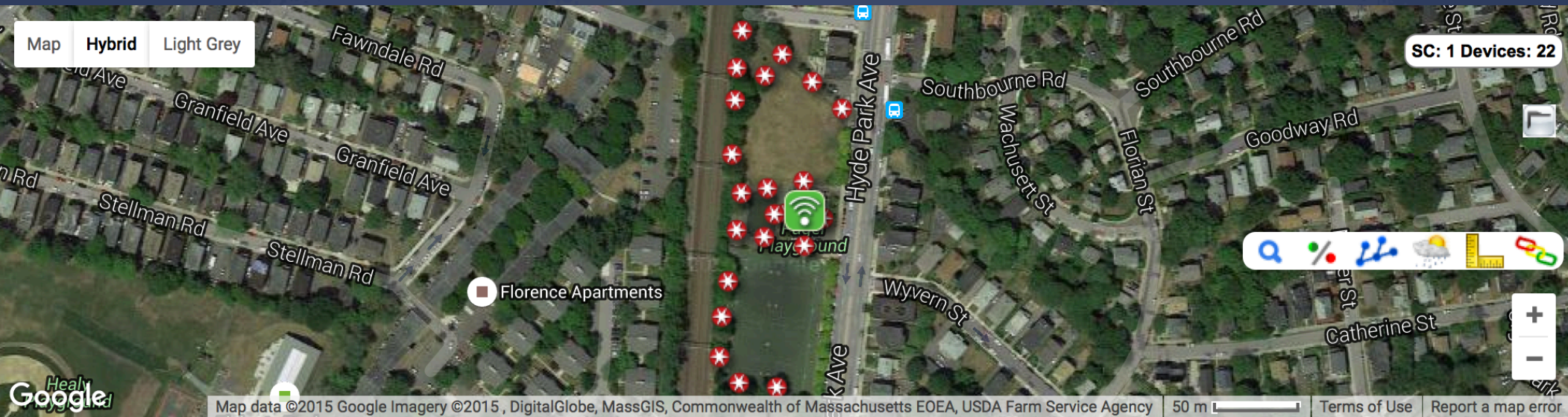
# Smarter Running a ~~Smart~~ City

## Information Technology



# “Smartest” ~~Smarter~~ Running a ~~Smart~~ City

Information and Communications Technology



# “Smartest” ~~Smarter~~ Running a ~~Smart~~ City

## Information and Communications Technology

### Schedule



#### Park Parameter (Group 1)

Poles (5-13, 17-20)  
8PM DIM 70% Power

#### Small Soccer Field Grounds (Group 2)

Poles (14-16)  
On at Sunset  
9PM 60% Power and down 10% every 5 min  
Lights OFF at 22:00-Sunrise

#### Parking Lot (Group 3)

Poles (1-4)  
On at Sunset  
9PM DIM to 40% Power  
11PM DIM 20% Power

#### Large Soccer Field (Group 4)

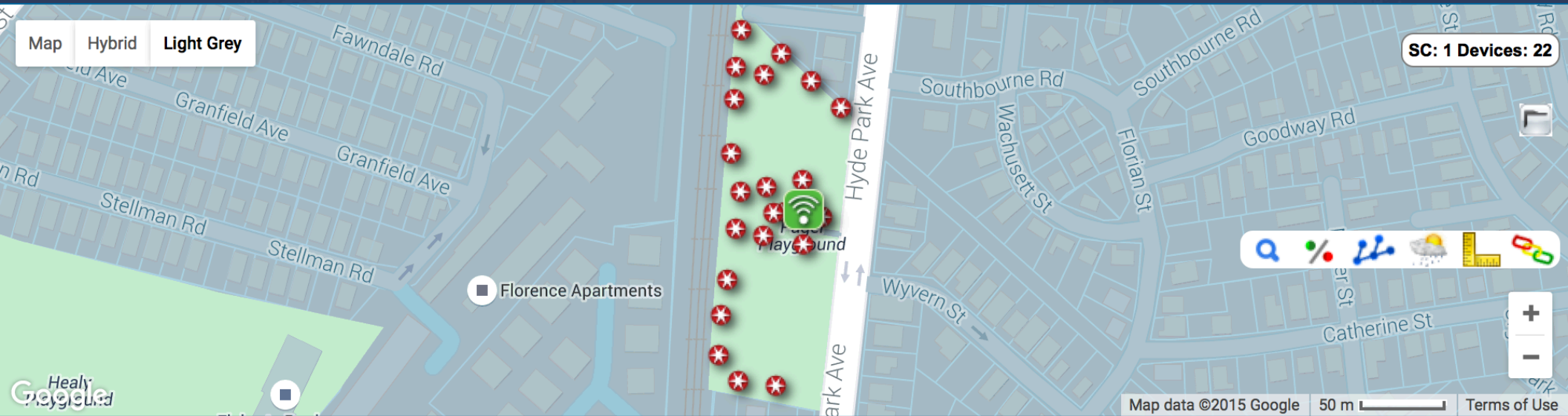
Poles (21, 22)  
On at Sunset  
8:30PM Dim 80% power and down 20% every 10 min after that  
Lights OFF at 21:00-Sunrise





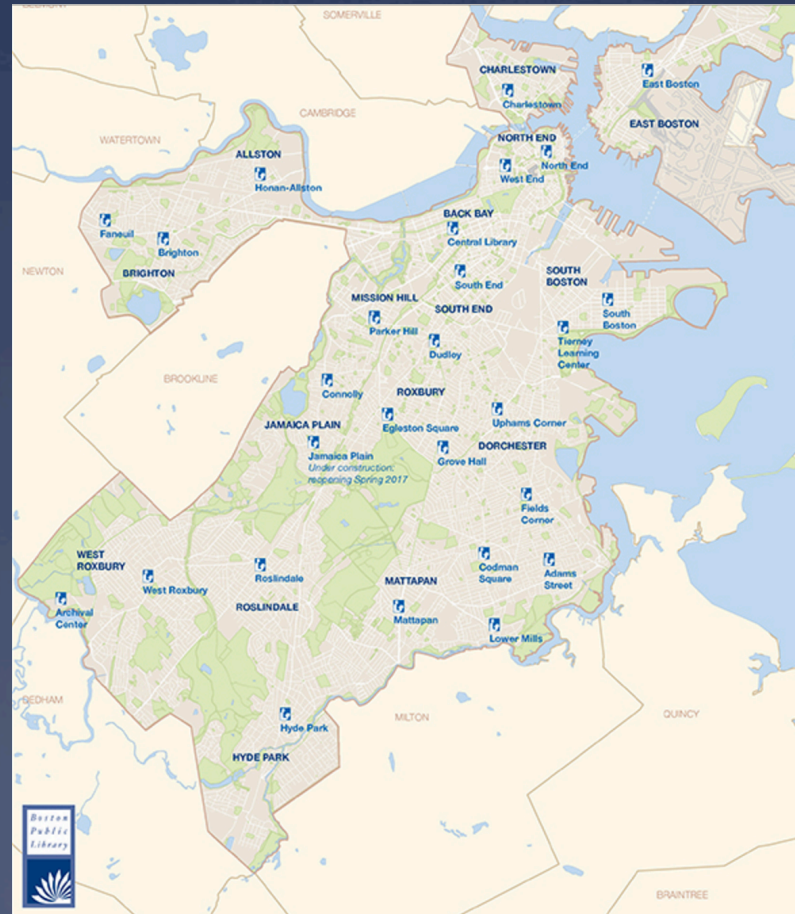
# “Smartest” ~~Smarter~~ Running a ~~Smart~~ City

Information and Communications Technology



# ~~“Smartest” Smarter~~ Running a ~~Smart~~ City

Information and Communications Technology



**“Smartest”  
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Information and Communications Technology

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## Information and Communications Technology

- Unprecedented levels of control over City assets, from individual devices such as street lights, to the operating condition of entire buildings.

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- Unprecedented financial savings on energy expenditures and responsiveness to constituent needs and demands.

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## Information and Communications Technology

- Unprecedented levels of control over City assets, from individual devices such as street lights, to the operating condition of entire buildings.
- Unprecedented financial savings on energy expenditures and responsiveness to constituent needs and demands.
- A path forward to reduce GHG emissions 80% by 2050.

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