MAYOR’S INNOVATION PROJECT
SMART CITIES

Josh Naramore
Mobile GR Director
CITY OF GRAND RAPIDS
How do we define Smart City Grand Rapids?
SMART CITY POLICY FRAMEWORK

1. Data Gathering
   Using technology and analytics to monitor and detect problem areas. Data leads to the development of questions that can be tested throughout the framework process.

2. Pilot Testing
   There are many options to choose from when developing an effective project. Choosing the wrong option can be costly and time consuming. Pilot testing allows for testing various options without making a large commitment of resources.

3. More Decision Making
   Using data and analytics from pilot testing to make a data driven decision about if the project will have the desired effect or if another solution needs to be developed.

4. Policy Drafting
   Creating specific policies that, using everything that has been learned, will clearly guide the project and allow for growth through the sharing of information gathered.

5. Procurement
   Using everything learned throughout the process to create a robust RFP that clearly outlines its requirements and expectations. This increases certainty and confidence in a purchase.

6. Iterative Process

Iterative Process
1ST PHASE: DATA COLLECTION
Realtime Occupancy

Key Statistics

<table>
<thead>
<tr>
<th>Show</th>
<th>Total</th>
<th>statistics for</th>
<th>Yesterday</th>
<th>compared to</th>
<th>Aug 14, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$13,227</td>
<td>Transactions</td>
<td>8,158</td>
<td>Revenue/Trans.</td>
<td>$3.77</td>
</tr>
<tr>
<td>$4,625 (54%)</td>
<td></td>
<td></td>
<td></td>
<td>Last Year: $3.73</td>
<td>$0.04 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak Occupancy</td>
<td>4,084 (53%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last Year: 3,459 (45%)</td>
<td>Last Year: 3,462</td>
<td>Transient only: 625 (18%)</td>
<td></td>
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</table>
Parking Enforcement Rates & Times

Disabled Parking Meters

Electric Vehicle Charging Station

Parking Meters/Spaces

- Hourly Rates:
  - $1/hr
  - $1.5/hr
  - $1.75/hr

Parking Spaces

- Hourly Rates:
  - $1/hr
  - $1.5/hr
  - $1.75/hr

Enforcement Times

Enforcement Days & Times
- 8 am - 3 pm, Monday - Friday
- 8 am - 6 pm, Monday - Friday
- 8 am - 6 pm, Monday - Saturday
- 8 am - 8 pm, Monday - Saturday
- 9 am - 3 pm, Monday - Friday
This is our community platform for exploring and downloading open data. We encourage you to discover and build apps. We hope you engage this data to solve important local issues. You can analyze and combine Open datasets using maps, as well as develop new web and mobile applications. Let’s make our great community even better, together!

This project is in its initial iteration, and we welcome your feedback on how to improve. We will be publishing new data monthly.

What’s New
July 2018
• 2017-2014 Crime Locations
• Fiscal Year 2019 Approved Budget
• Zoning District Data
May 2018
• Preliminary Fiscal Budget FY2019
• City Health Dashboard

Data Categories

- Boundaries
- Budget
- Demographic
- Housing
2ND PHASE: PILOT TESTING
FOOD TRUCKS & LOADING ZONES
GRAND RAPIDS BREATHE PROJECT
MULTI-LAYERED SYSTEM & CONSORTIA:

NO2/SO2/O3/PM2.5 Sensors

LoRa™

External data sources
Satellites
Weather
Traffic
Stations
Base layer

Data Collection, Analysis & Output

Your Applications
Air Quality API
History API
Forecast API
Heatmap API
Pollen API

Tablet
Mobile
Smart watch
Web
**LoRa network** provides power and connection to internet.

**Integration platform** collects all sensor data, including weather, congestion, other contextual information.

'Shoebox' (OST, UM) sensors for PM, O3, and NO2

**Informed & Engaged Citizens**

**GRAND RAPIDS BREATHE PROJECT**

**MULTI-LAYERED SYSTEM:**

**LoRa network** provides power and connection to internet.

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**BENEFITS:**

**City of Grand Rapids:**
- Livability index
- Establishing pollution ‘safe zones’
- Incentives for clean mobility
- Smart routing to improve problem areas.
- Enforce ‘safe zones’; Schools, Hospitals, etc.

**Consumers:**
- Clean routes, activity planning
- Transparency of city/business action and results
- Health alerts and notifications for ‘at risk’ consumers

**Business community:**
- Sustainability goals and reporting
- Informing, confirming effective air-quality devices/air-treatment solutions
- Healthcare notifications and analysis
- Open platform for ‘smart city’ innovation
SMART TRANSPORTATION INFRASTRUCTURE
SMART TRANSPORTATION
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