Datacrowd

First Milestone Presentation

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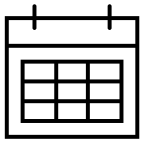
Mission Statement

Crowd Monitoring in Public Spaces

Problems:

- Overcrowding
  - Disease Transmission Risk [Hospitals, Public Spaces]
  - Air Quality Considerations [Closed areas, Shops etc.]

- Personal Scheduling
  - Avoid High Traffic Hours or Spaces
  - Visit recreational spaces during peak popularity
  - Convoluted Personal Time Schedules



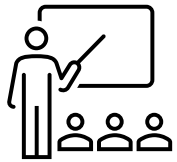
- Resource Management
  - Ineffective Employee timetables
  - Public Transport Dispatching
  - Marketing in Public Spaces

- Long Term Planning
  - Urban Planning
  - Business Decisions [Store Locations, Amenities Planning]

Solutions

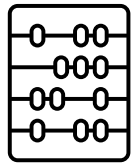
Inform Public for better decision making

- Real time data and Predictions [heatmaps and graphs]
- Suggestions and Alerts



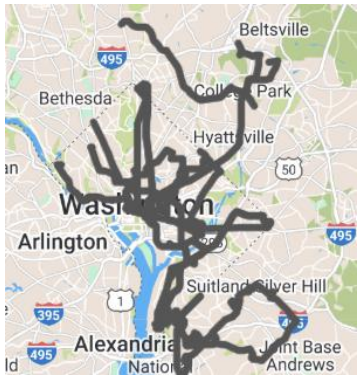
Monitoring Tools for Authorities & Businesses

- Crowd Overview
- Insights for better resource allocation
- Alerting and notifying

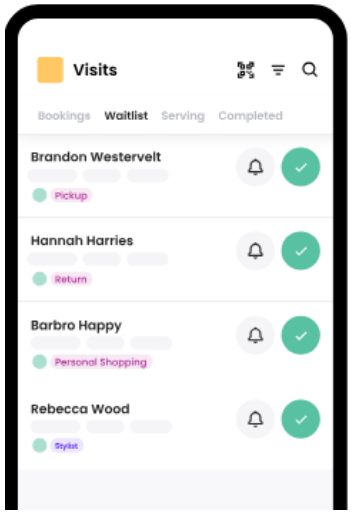


Tools for Long Term Planning

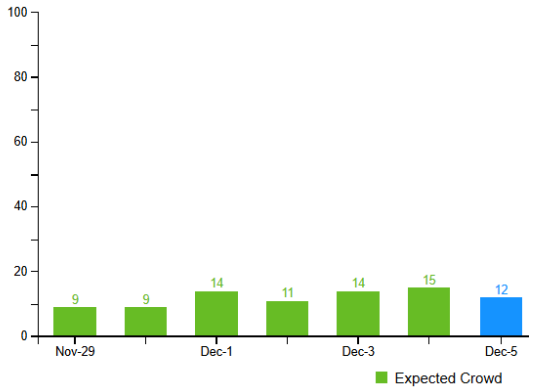
- Insights about infrastructure planning in popular areas
- Effectiveness evaluation for measures taken



Features/App	Public Transit apps	Avoid crowds	Waitwhile	Google Places API	Foursquare	Datacrowd
Crowd Prediction		X	X	X	X	X
Multi-source model						X
Business & Authorities Insights			X	X	X	X
Commute Scheduling	X			X	X	X



- https://www.wmata.com/service/status/
- https://avoid-crowds.com/
- https://waitwhile.com/
- https://developers.google.com/maps/documentation/places/web-service
- https://foursquare.com/



Other solutions

Data sources

Collect data from:

- Traffic in public networks (WiFi4EU, Eduroam)
- Environmental sensors (CO_2, Temperature, Humidity)
- Google places API
- Camera feeds in public places
- Bluetooth sensors in public places

Requirements

- Access to traffic in public networks
- Access to the Places API
- Sensors (CO_2, Temperature, Humidity) - 169€
- IP Cameras - 30€
- Raspberry Pi - 70€
- Bluetooth traffic sensors

Target audience

- Citizens
  - Students
  - Users of Public Transport and Services
  - Tourists
- Authorities and Businesses
  - Educational Institutions
  - Municipal Authorities
  - Public Transport Authorities
  - Private Businesses
  - Groups of Businesses

https://developers.google.com/maps/documentation/places/web-service/overview

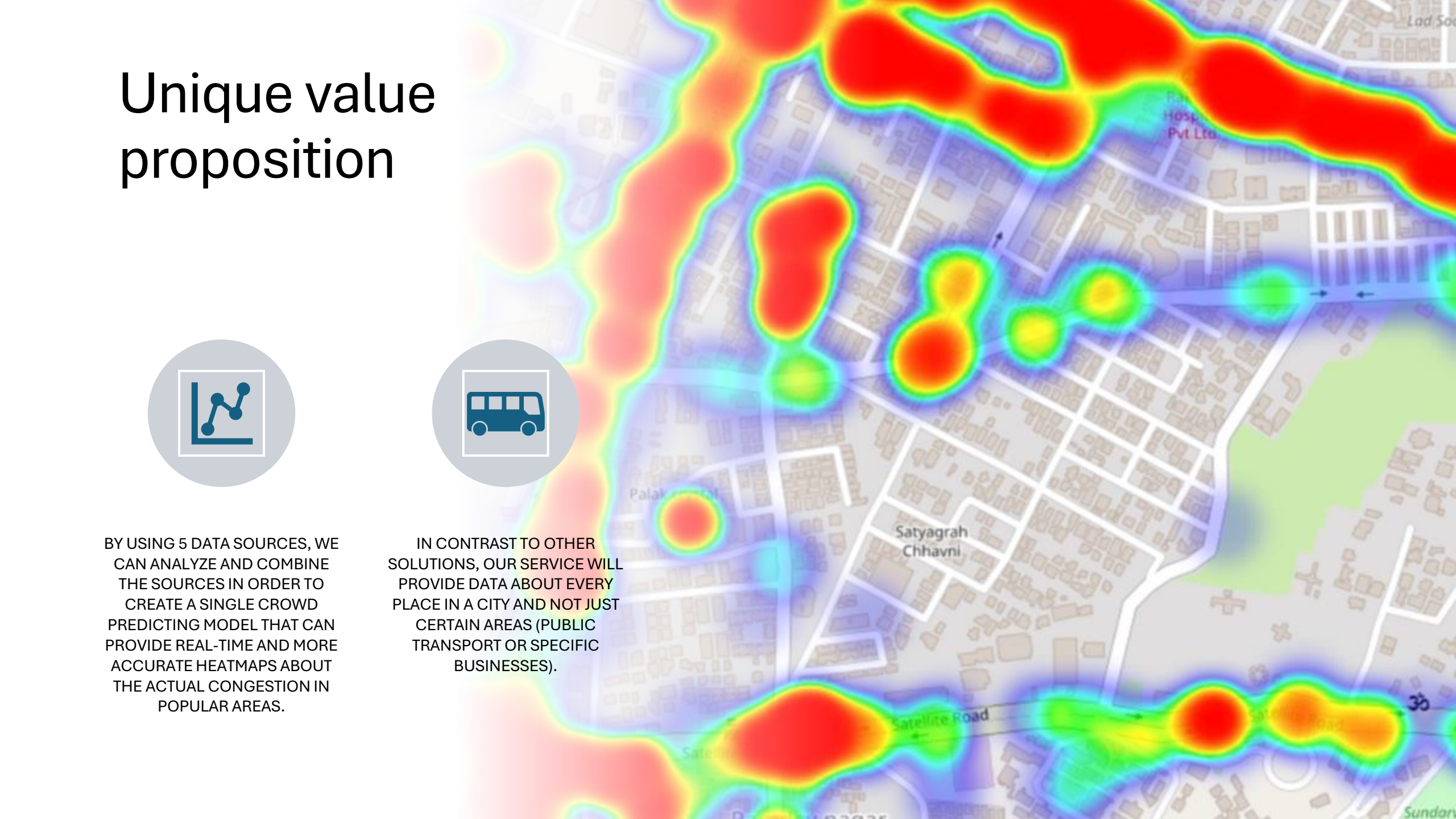
https://mclimate.eu/products/mclimate-co2-sensor-notifier-lorawan?variant=47859023806796

https://www.skroutz.gr/c/688/kameres-parakolouthisis/f/916690/IP.html

https://www.skroutz.gr/s/19212716/Raspberry-Pi-4-Model-B-4GB.html

https://www.researchgate.net/publication/272071234_Bluetooth_Sensors_for_Vehicular_Traffic_Monitoring

Unique value proposition



BY USING 5 DATA SOURCES, WE CAN ANALYZE AND COMBINE THE SOURCES IN ORDER TO CREATE A SINGLE CROWD PREDICTING MODEL THAT CAN PROVIDE REAL-TIME AND MORE ACCURATE HEATMAPS ABOUT THE ACTUAL CONGESTION IN POPULAR AREAS.

IN CONTRAST TO OTHER SOLUTIONS, OUR SERVICE WILL PROVIDE DATA ABOUT EVERY PLACE IN A CITY AND NOT JUST CERTAIN AREAS (PUBLIC TRANSPORT OR SPECIFIC BUSINESSES).

Thank you for your time!