Hasa Reddy

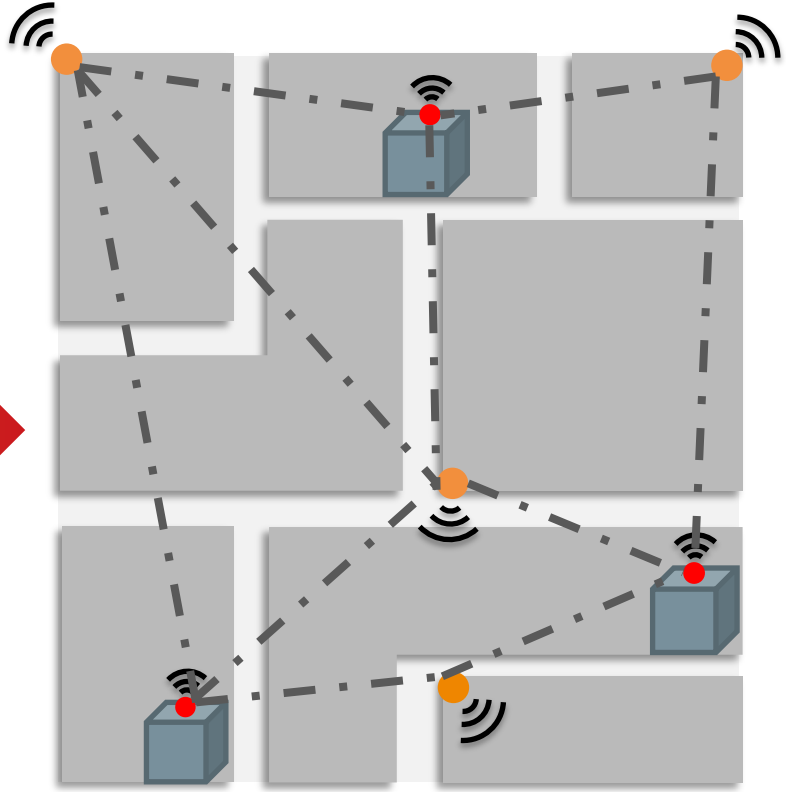
Concept

Proposal to tackle food insecurity along with proving supporting infrastructure to further digital inclusively in the City of Philadelphia.

Food insecurity in Philadelphia 21%
17% of trash sent to the landfill is wasted food

Food insecurity based on FAO

"Don't let the digital divide become 'the new face of inequality': UN"



Conceptually on a neighbourhood scale

Users

ERIK
Age: 41yrs.
Education:
Highschool
Background
Homeless
Needs
Meals regularly and govt programs for the homeless

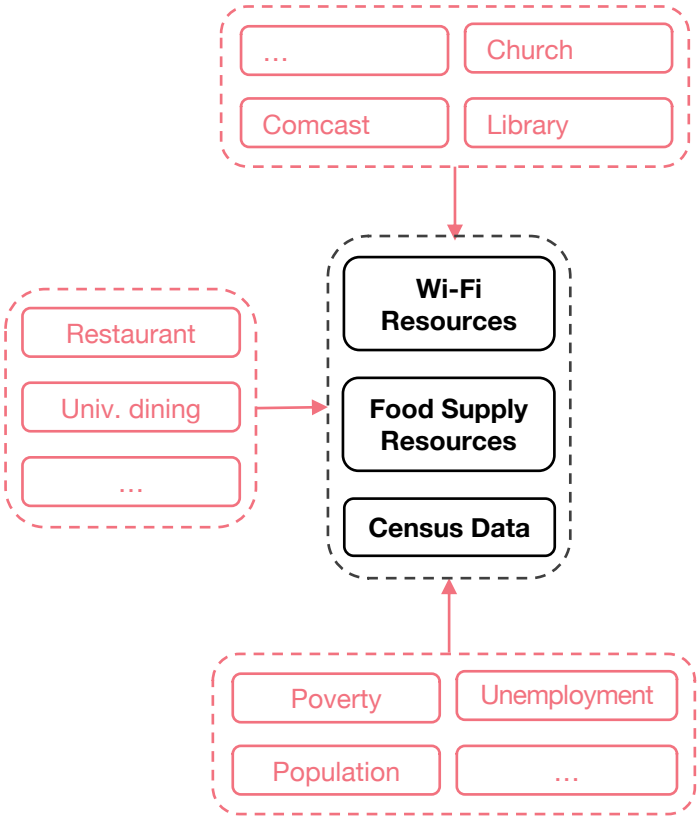
Suzan
Age: 69 yrs.
Education
School dropout
Background
Living alone
Needs:
Community engagement

MAX
Age: 13 yrs.
Education
8th Grade
Background
Household with no consistent income
Needs
Wholesome meals

Miriam
Age: 39 yrs.
Education
Grad
Background
Income < $20000 and single mother
Needs
Internet to look up govt. programs & meals for 2

Trey
Age: 23 yrs.
Education
Attending community college
Background
Doing part time jobs and studying
Needs
Access to internet to apply to jobs

Household of 4
Mother, Father
And 2 kids in K-12
Background:
Household income < $30000, one of the parent lost job recently
Needs:
Regularly meals
Internet to apply for jobs



Step 1. Data Collection

Wi-Fi Resources
Where needs more Internet coverage

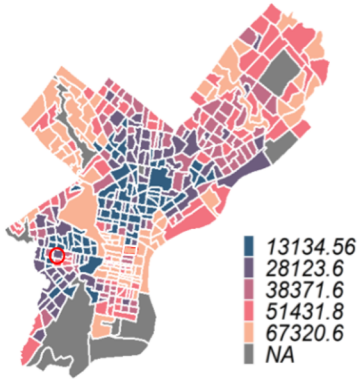
Food Supply Resources
Where and When to collect the food

Census
Where to send

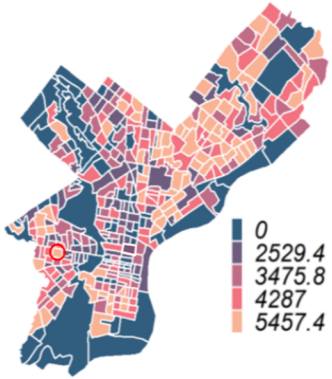
Income, population and poverty map

Detailed information of test bed site.

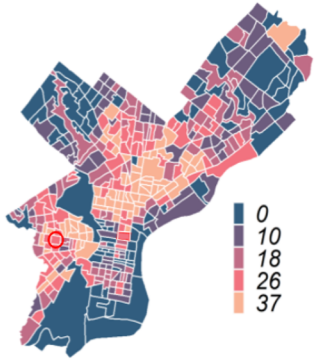
Site location



Map of median household income



Map of total population



Map of percentage of poverty

Income

$17,039
Per capita income

about three-fifths of the amount in Philadelphia: $27,924

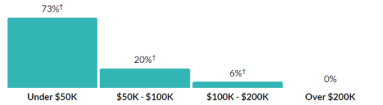
about three-fifths of the amount in Philadelphia County: $27,924

$33,429
Median household income

about three-quarters of the amount in Philadelphia: $45,927

about three-quarters of the amount in Philadelphia County: $45,927

Household income



Show data / Embed

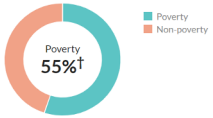
Poverty

35.6%
Persons below poverty line

about 1.5 times the rate in Philadelphia: 24.3%

about 1.5 times the rate in Philadelphia County: 24.3%

Children (Under 18)



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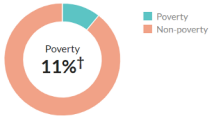
Seniors (65 and over)

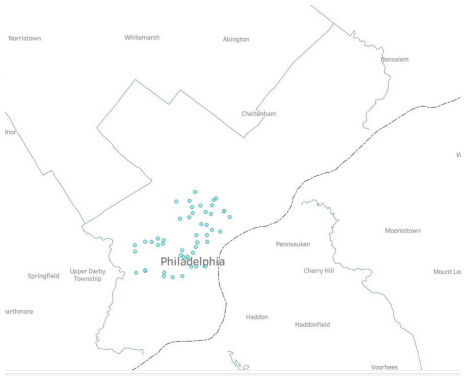


Show data / Embed

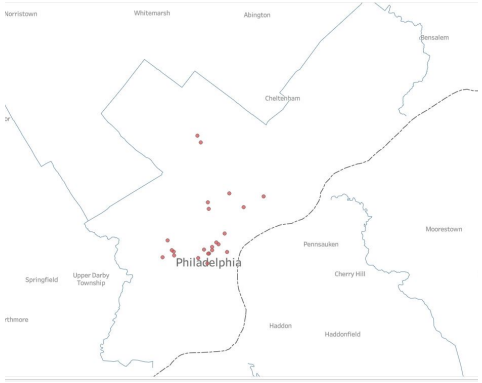
https://censusreporter.org/profiles/14000US42101008102-census-tract-8102-philadelphia-pa/

Testbed: Census tract 85, bounded by Market Street, South 50th Street, Pine Street and South 55th Street.

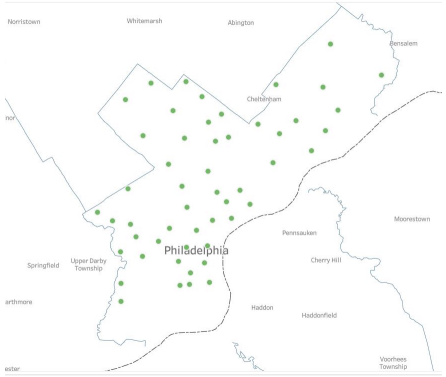
Data Presentation



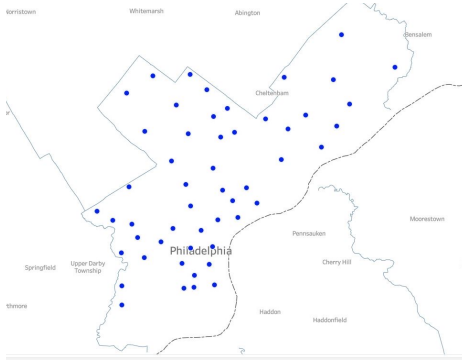
PhilAbundance Locations



General Meal Locations

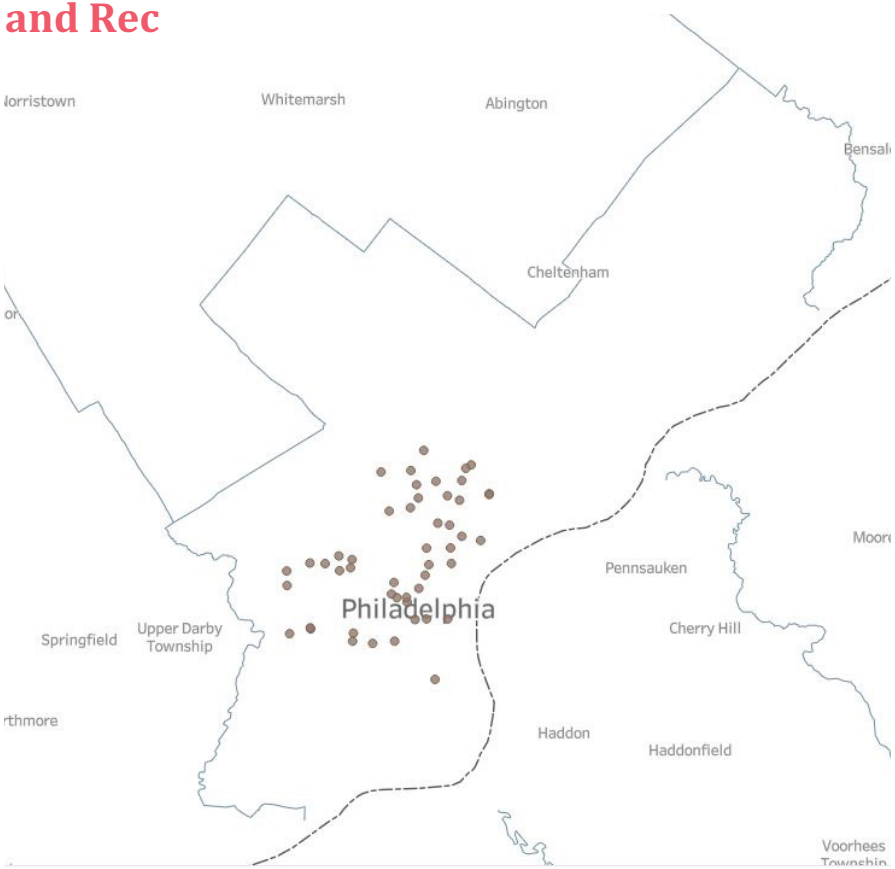


WiFi Locations

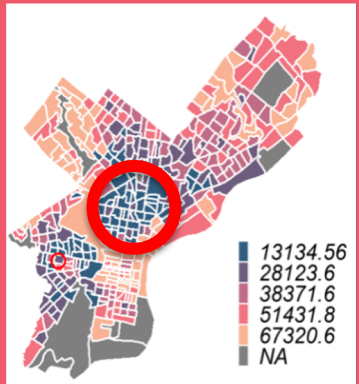


Parking Locations

Parks and Rec




```
for i in range(len(df_parknrec)):
    par_lat,par_lon=df_parknrec.iloc[i,-4:-2].values
    for j in range(len(df_lib_loc)):
        lib_lat,lib_lon=df_lib_loc.iloc[j,-2:].values
        dis=haversine((par_lat,par_lon),(lib_lat,lib_lon),unit=Unit.METERS)
        if dis<=100:
            df_parknrec.iloc[i,-2]+=1
            df_parknrec.iloc[i,-1]+=(df_lib_loc.iloc[j,0]+'_')
```



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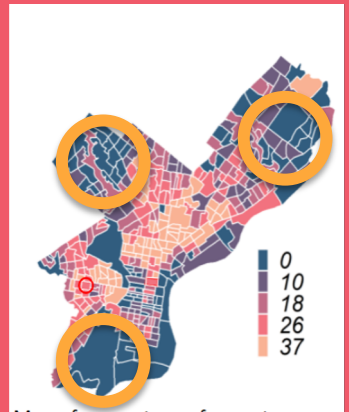

Map of percentage of poverty

Next steps and hurdles?

1. How to overlay the census data with flex network data set?
2. Trying to figure out how to locate the optimal locations in tracts that need these locations?