

## TEAM 4

### CHICAGO CRIME

#### STRATEGIC INSIGHTS FOR URBAN DEVELOPMENT

##### PART I

*How would you define a “Culture of Lawlessness”?*

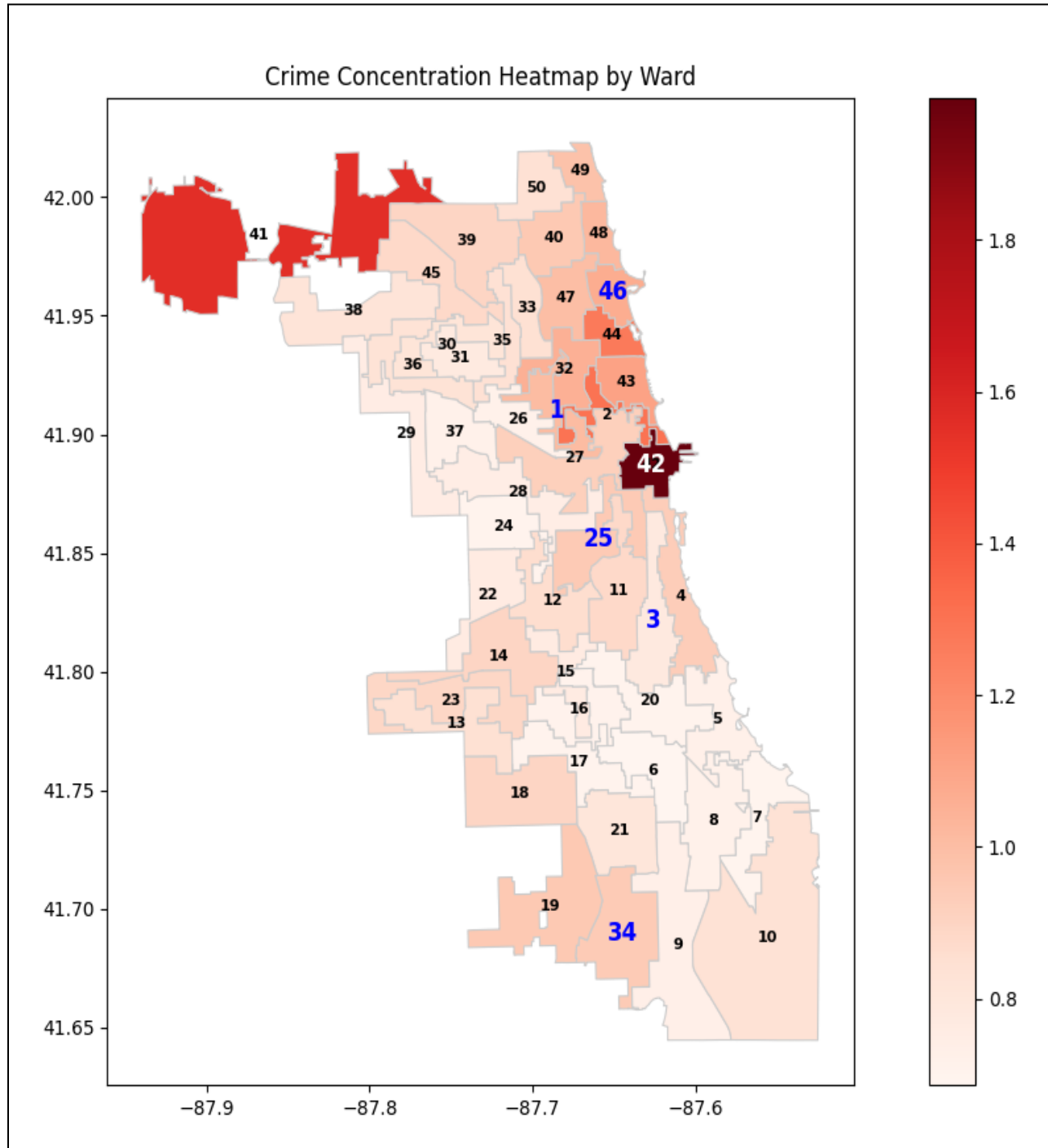
The "culture of lawlessness" in Chicago extends beyond crime statistics, impacting community safety and socio-economic well-being. We consider a rational approach, weighing various crimes' severity and its spread by measuring the frequency of cases registered to define it. Introducing the Crime Concentration metric, which was calculated using the following data sources:

- IUCR codes which give us descriptions of crimes.
- Chicago crime data set from Bigquery between the years 2021 to 2023.

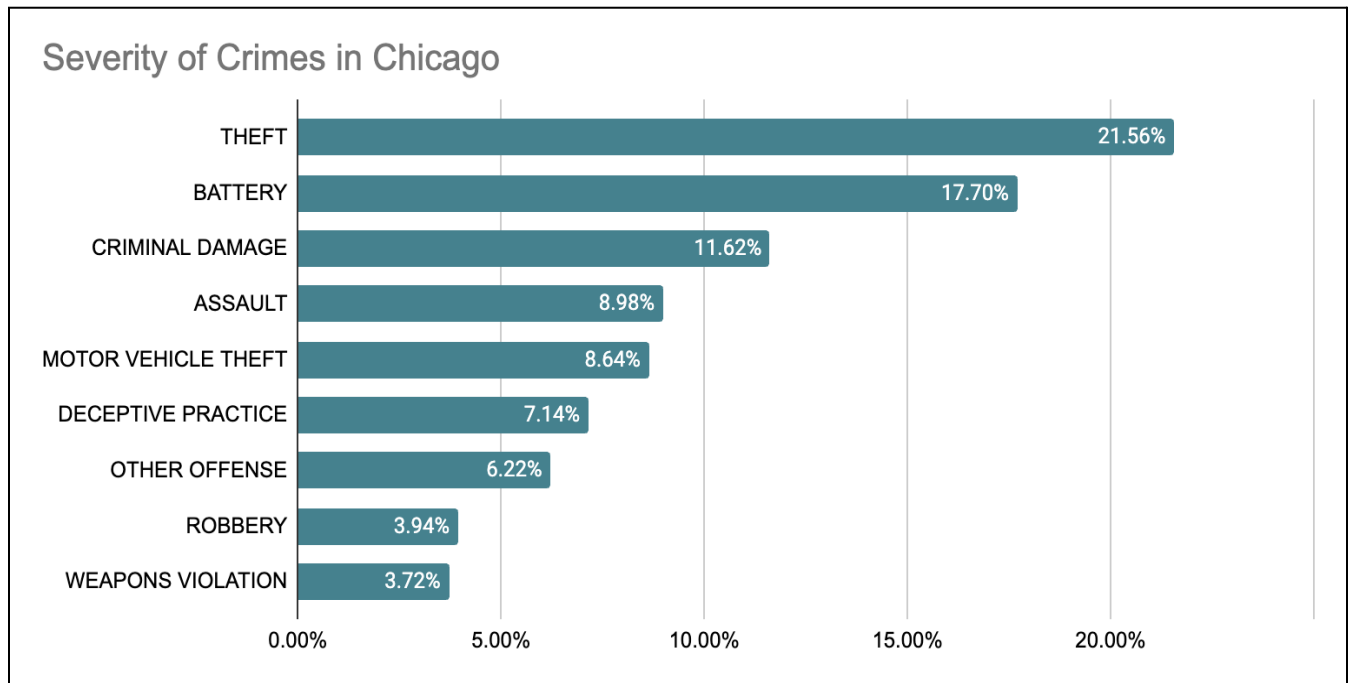
The Crime Concentration metric offers a nuanced perspective on criminal activity dispersion across the wards. This strategic tool aids urban planners and developers in understanding crime dynamics across Chicago's 50 wards. Addressing lawlessness holds broader societal implications, guiding community revitalization for positive socio-economic transformation.

The Crime Concentration analysis reveals insightful patterns crucial for effective urban development strategies.

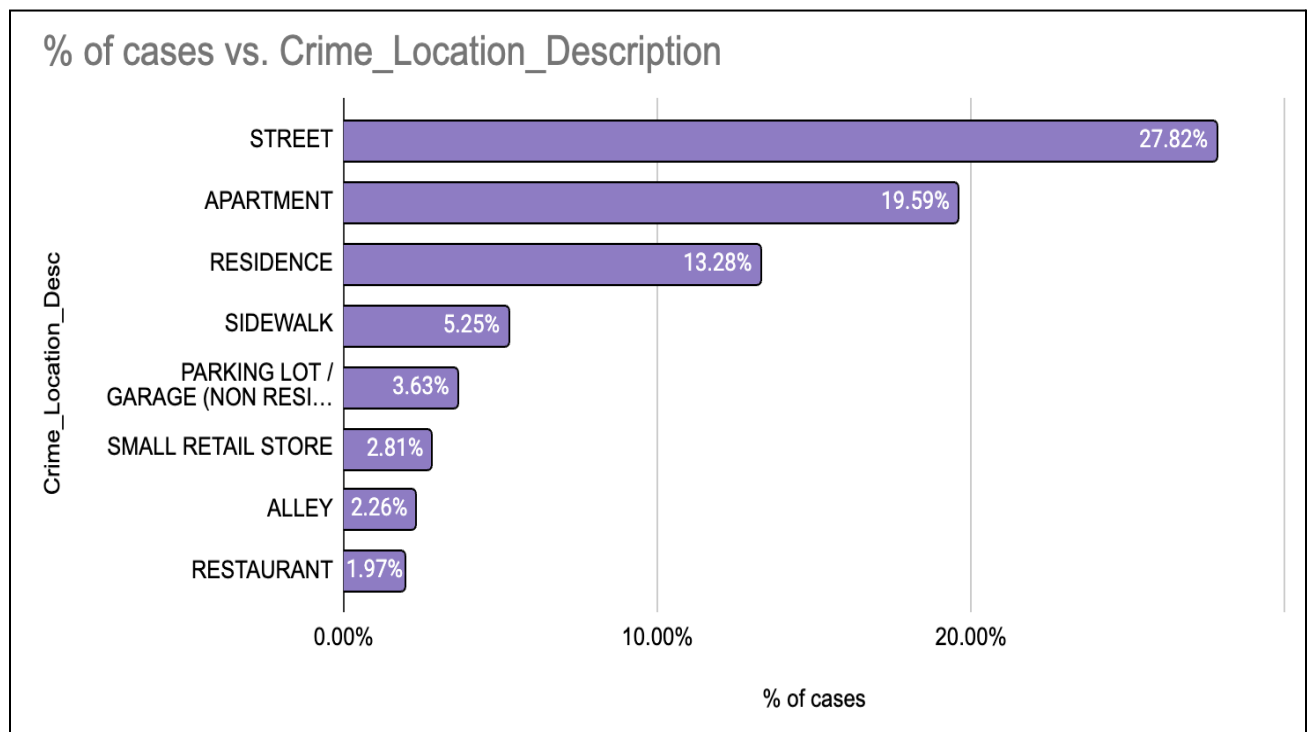
1. Concentration of crimes across all the Wards of Chicago



## 2. Severity of Crime happening across all the Wards of Chicago



## 3. Spread of Crime happening across all the Wards of Chicago



## PART II

### *Comparison of Wards:*

After doing a thorough statistical analysis, we finalized a list of the 5 best wards in Chicago that are in closer proximity and low in crime, relative to the Urban Core which is the 42nd Ward

| Wards | "Culture of Lawlessness" (Crime Concentration) | Normalized Avg_Speed (Proximity to UC ) | Preferability Score = $0.5 * (\text{avg\_speed} - \text{crime\_conc})$ |
|-------|--|---|--|
| 34    | 0.945  | 1.000                                   | 0.028  |
| 25    | 0.948  | 0.957                                   | 0.005  |
| 1     | 0.778  | 0.444                                   | -0.167   |
| 46    | 1.011  | 0.714                                   | -0.148   |
| 3     | 1.067  | 0.759                                   | -0.154   |

Developing ward profiles involves a thorough analysis of key factors influencing real estate desirability. We meticulously considered:

- Average travel time and
- Average travel distance
- Encompassing public and private transportation options.

Crime concentration is pivotal in shaping perceptions of safety and security. Normalized average speed calculated from the above-mentioned metrics provides a comparative advantage assessment, while property value ranges and travel speed offer insights into investment potential and accessibility.

These factors collectively form nuanced ward profiles, aiding decision-makers in the international property development company. The normalization of data enhances its utility for a comprehensive evaluation.

### Visualizing Opportunities:

Our visualizations, including the informative graphs on prevalent crime types and the comprehensive Heat Map illustrating crime concentration, offer dynamic insights for urban development. These tools not only unravel crime intricacies but also provide actionable insights for strategic resource allocation and interventions.

### Conclusion:

By presenting these visualizations, our aim is to equip stakeholders with a comprehensive understanding of Chicago's wards for informed urban development decisions. Beyond crime statistics, we offer a transformative lens, turning challenges into opportunities and contributing to the growth and appeal of dynamic urban communities.

### PART III:

#### *Building Ward Profiles*

Analyzing the comprehensive table derived from extensive data reveals that proximity to the urban core is a paramount priority. The statistical analysis assigned positive and negative weights based on crime concentration, shaping the desirability prediction for areas closer to the urban core radially.

#### Comparing Ward Profiles:

##### 1. Crime Concentration:

- Negatively weighted, indicating higher crime concentration is less desirable.
- Categories: High-Moderate-Low.

| WARD NO | "Culture of Lawlessness"<br>(Crime_Concentration) | Rating   |
|---------|---|----------|
| 34      | 0.945   | Moderate |
| 25      | 0.948   | Low      |
| 1       | 1.011   | Moderate |
| 46      | 1.067   | Moderate |
| 3       | 0.778   | Low      |

##### 2. Travel Time:

- Categories: Long-Moderate-Short.

| WARD NO | AVERAGE TRAVEL TIMES<br>( in Mins) | Rating   |
|---------|------------------------------------|----------|
| 34      | 43                                 | Long     |
| 25      | 18.5                               | Short    |
| 1       | 15                                 | Short    |
| 46      | 25.5                               | Moderate |
| 3       | 27                                 | Moderate |

3. Avg Distance:

- Categories: Long-Moderate-Short.

| WARD NO | Average Distance (Miles) | Rating   |
|---------|--------------------------|----------|
| 34      | 15                       | Long     |
| 25      | 6.3                      | Moderate |
| 1       | 4.4                      | Short    |
| 46      | 7.7                      | Moderate |
| 3       | 6.5                      | Moderate |

4. Property Value Range:

- Categories: High End-Affordable-Cheap.

| WARD NO | Property Values Range |           | Rating    |
|---------|-----------------------|-----------|-----------|
|         | Minimum               | Maximum   |           |
| 34      | \$190,000             | \$190,000 | Low       |
| 25      | \$270,000             | \$340,000 | High- end |
| 1       | \$370,000             | \$510,000 | High- end |
| 46      | \$170,000             | \$250,000 | Moderate  |
| 3       | \$220,000             | \$300,000 | Moderate  |

5. Avg Speed:

- Positively weighted.

| WARD NO | Average_Speed(miles/min) |
|---------|--------------------------|
| 34      | 0.341                    |
| 25      | 0.293                    |
| 1       | 0.302                    |
| 46      | 0.241                    |
| 3       | 6.5                      |

6. Preferability Score:

- Categories: Balanced-Moderate-Concerning.

| WARD NO | Preferability Score | Rating   |
|---------|---------------------|----------|
| 34      | 0.028               | Balanced |
| 25      | 0.005               | Moderate |
| 1       | -0.148              | Moderate |
| 46      | -0.154              | Moderate |
| 3       | -0.167              | Moderate |

Comparative Analysis:

To compare these metrics effectively, we consider the overarching metric of Desirability (**Preferability Score**). We calculate that score by taking a Weighted Sum of

- *Crime Concentration*
- *Average Speed*

Assigning categories to each metric enables a more efficient evaluation of the data at hand.

Conclusion:

The categories, especially Desirability, act as crucial benchmarks in determining the overall appeal of a ward. By integrating metrics such as time, distance, and crime concentration, we derive a holistic understanding of each ward's desirability, providing valuable insights for strategic urban development decisions.



## **PART IV:**

### **WARD Alderpersons (City Ward Representatives)**

#### **WARD 34:**



**Alderperson name: William Conway**

They have been actively involved in Infrastructure Improvements in the 34th Ward:

- Resurfacing work was completed on Jackson Street from Ashland to Halsted, including pavement striping and landscaping.
- Bike island installation in Loomis Street, from Roosevelt to Congress, has also undergone resurfacing, with the project now finished.

#### **WARD 25:**



**Alderperson name: Byron Sigcho-Lopez**

They have been a prominent advocate for the community, focusing on holding public institutions accountable and safeguarding the rights and voices of residents of the 25th Ward:

- Supported community residents in efforts to halt the Pilsen landmark designation, advocating against increased building maintenance costs that could negatively impact over 800 affordable housing units.
- Increased investment in violence prevention programming for the ward.
- Maintains a commitment to holding public institutions accountable.

**WARD 1:**

**Aldersperson name: Daniel La Spata**

They have been active in planning and executing for the Chicago Recovery Plan Overview:

- Objective: Federal Funding for Sustainable Economic Recovery Post-COVID-19:
- Advocacy Focus: Promoting federal funding to facilitate a sustainable economic recovery post-COVID-19, with a particular emphasis on equity and community involvement.
- Funding Sources: Leveraging resources from the American Rescue Plan Act (ARP) and over \$600 million in local bond funds.
- Timeframe: Implementing initiatives over a span of 3-5 years to ensure a comprehensive recovery.

**WARD 46:**

**Angela Clay**

- Angela Clay actively engages in community development and advocacy.
- She focuses on fostering positive change within communities through various projects.
- Her initiatives encompass education, economic development, and social justice.

## **WARD 3:**



**Alderman Pat Dowell**

Pat Dowell has a background in urban planning and community development:

- She was instrumental in the Bronzeville Development Plan, winning a Burnham Award.
- Previously, she served as a City Planner and Deputy Commissioner under several mayors.
- Dowell led the Near West Side Community Development Corporation, overseeing affordable housing and retail projects.
- She founded the Mid-South Planning and Development Commission, securing funding for Bronzeville landmarks.
- Dowell also directed Chicago Public Allies, a national youth development organization.