Netivot |urban density research by Tal Nidam

For a variety of human connections

Project overview

This project analyzes the existing and proposed urban density in the city of Netivot, based on official municipal plans. Using spatial data extracted from planning documents and zoning maps, the study identifies the distribution and allocation of land uses (e.g., residential, commercial, industrial) and compares the density distribution, highlighting the potential impact of the proposed urban plan.

Planning principals

- **Grid** | A continuous street grid allowing for a variety of routes.
- **Public Density** | High public density to create intimacy and anonymity at the same time.
- **Mixed Ground Uses** | Creating a mix of populations and a variety of activity hours.

City ID

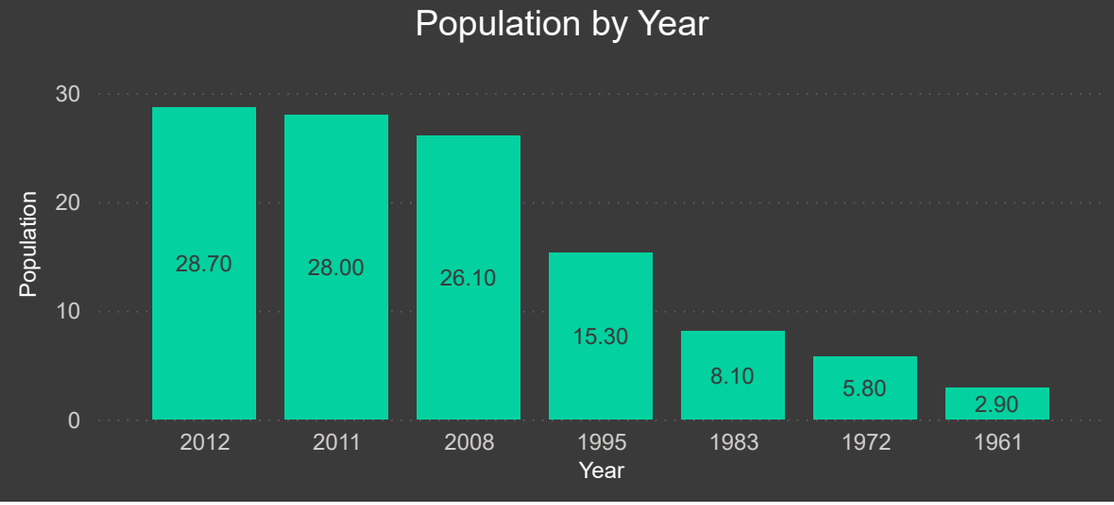
1956 | Established
Established as a transit camp ("Azata") for immigrants from North Africa (Morocco, Tunisia, and Egypt), as part of a national government plan to settle the Negev.

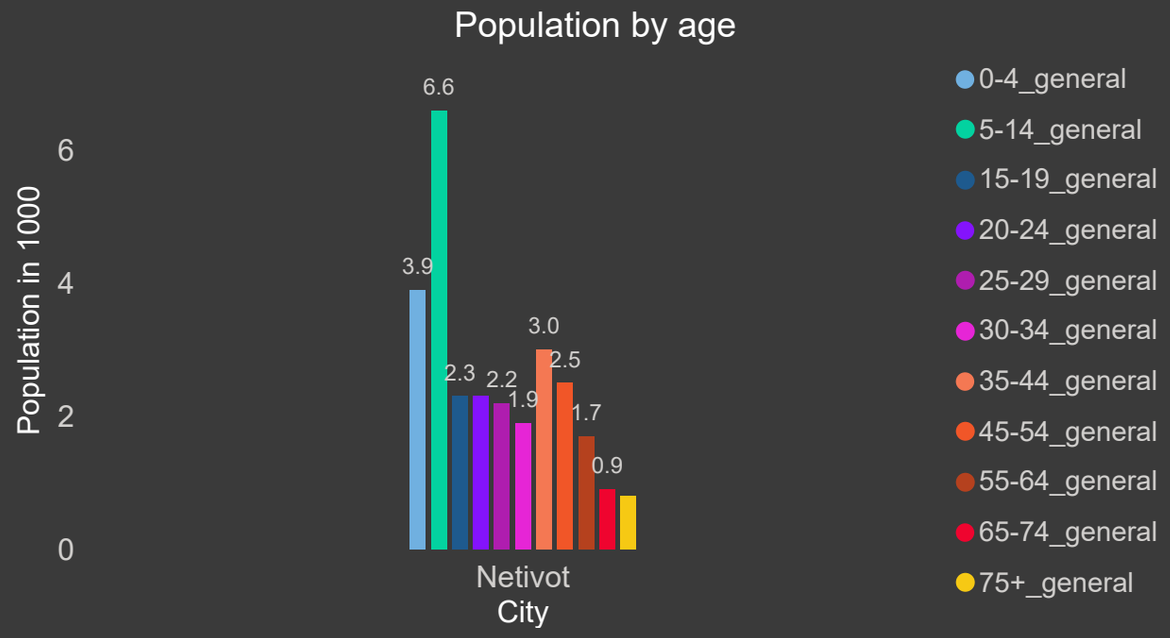
1960 | Name Change
The name was changed to "Netivot."

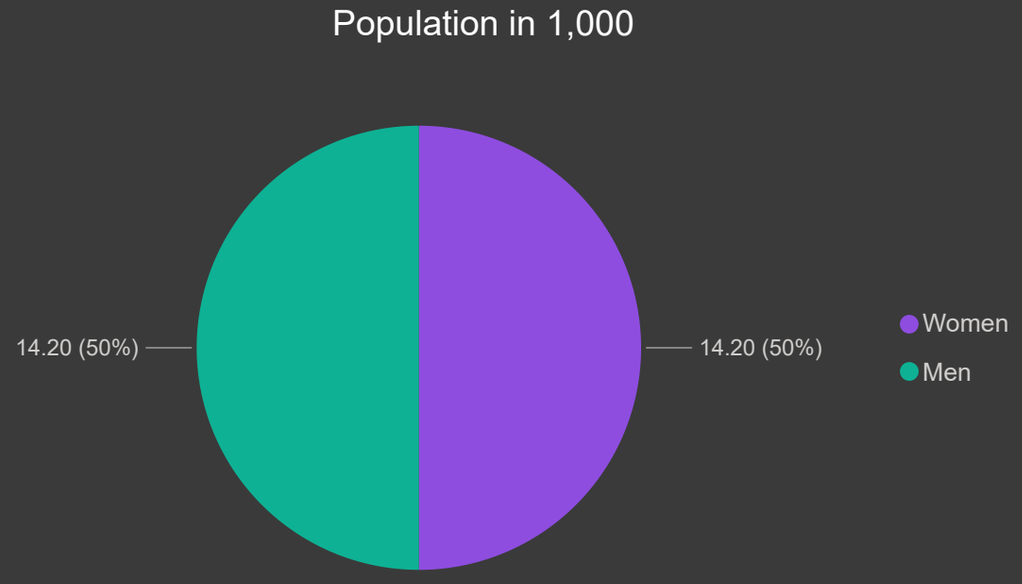
1980s | Migration
Migration to the city from surrounding agricultural settlements due to the decline of the agricultural sector.

1990s | Growth
Significant population growth due to waves of immigration from the former Soviet Union and Ethiopia.

2000 | Declared a City







Grid

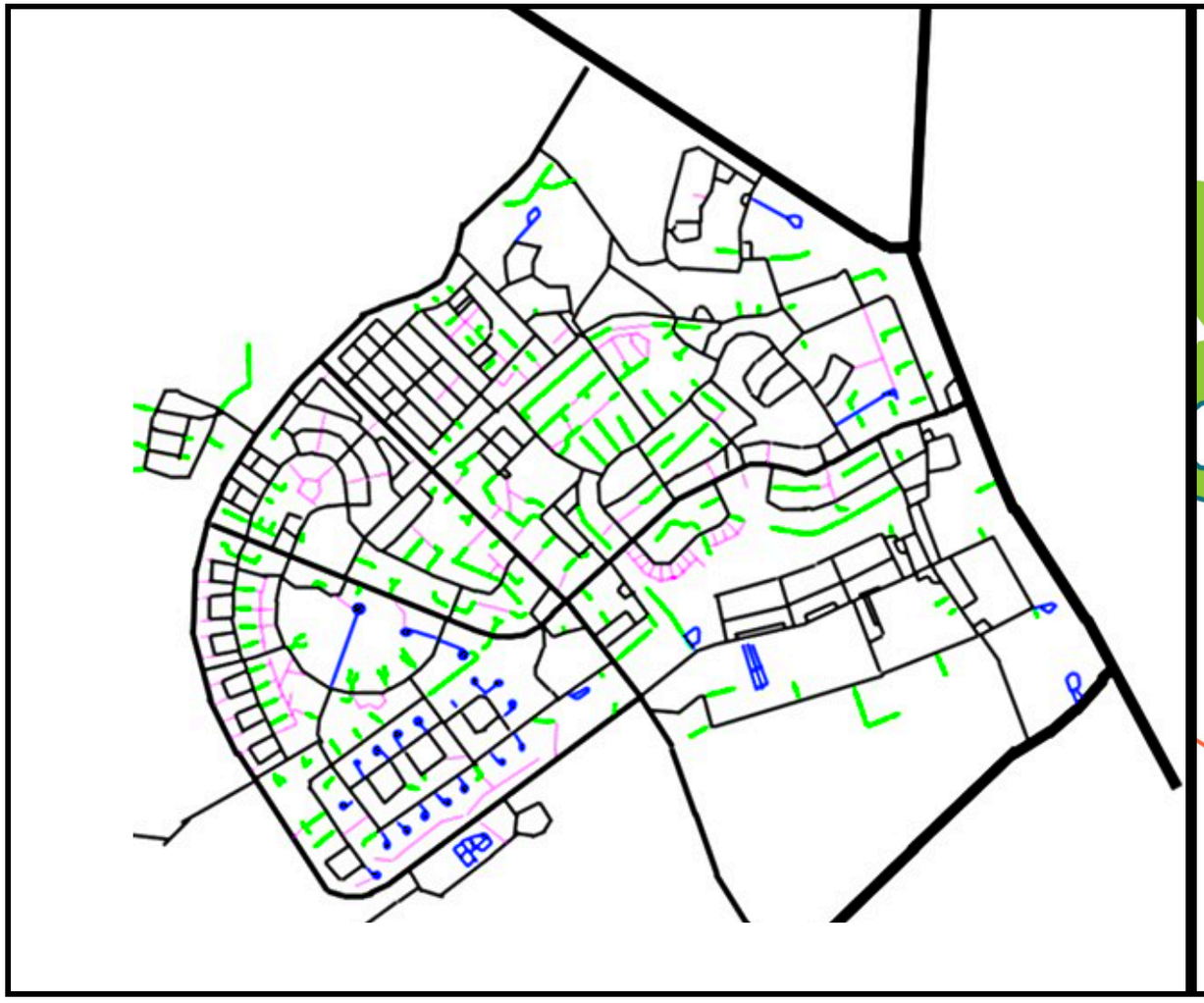
- Creating a continuous grid with maximum circulation.
- An intersection grid with spacing ranging from 60 to 150 meters.

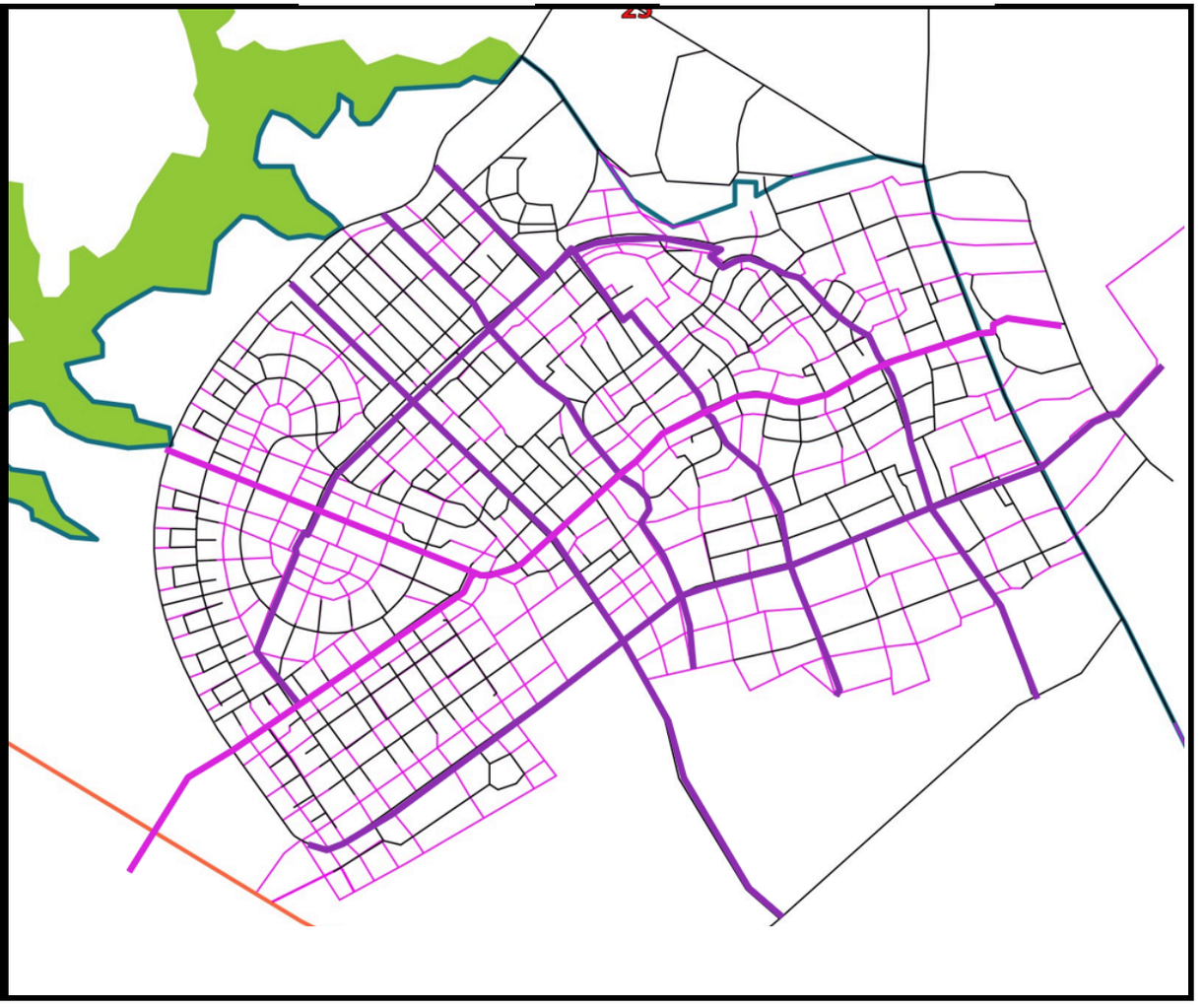
Existing grid

- Dead end streets with U-turn
- Dead end streets with no U-turn
- Pedestrian road

Proposed grid

- Grid addition
- Main streets
- Train
- wadi
- Municipal border





Public Density

City areas according to city records

Nolli map

Private area 2,287,157sqm

General area 4,049,992 sqm

Coverage area 50%

Built area 720,850 sqm

Public Density

Calculating public density per person

1) Built area in city/block - Data found in municipal records or GIS maps.

2) Set parameter - 20 sqm of build area per person.

3) Finding the estimated amount of people in a block/city - Built area ÷ 20 = Amount of people

4) Public Open Space area - Data found in municipal records or GIS maps.

5) Finding the (public) open space per person - Public Open Space area ÷ Amount of people = Open Space per Person

*****The lower the number, the higher the density and quality of the city/block**

Public density by city block

City/Block Location	Built area(sqm)	Estimated no. of people (Built ÷ 20)	Public Open Space (sqm)	Open Space per Person (POS ÷ People)
Bayburt, Turkey	35,000	1,750	2,301	1.30
Georgetown, Guyana -Block	35,744	1,787	4,410	2.40
Igualada, Spain - Block	11,655	582	1,646	2.80
Netivot - Center	2,655	530	7,965	15.00
Netivot - East	10,607	397	15,279	38.00
Netivot - North	71,830	3,591	124,284	34.00
Netivot - West	7,952	639	19,292	30.00
Paris - Block	15,460	773	1,481	1.90
Tel-Aviv - Block, Dizengof	11,992	599	3,057	5.00

Public Density

Netivot, IL

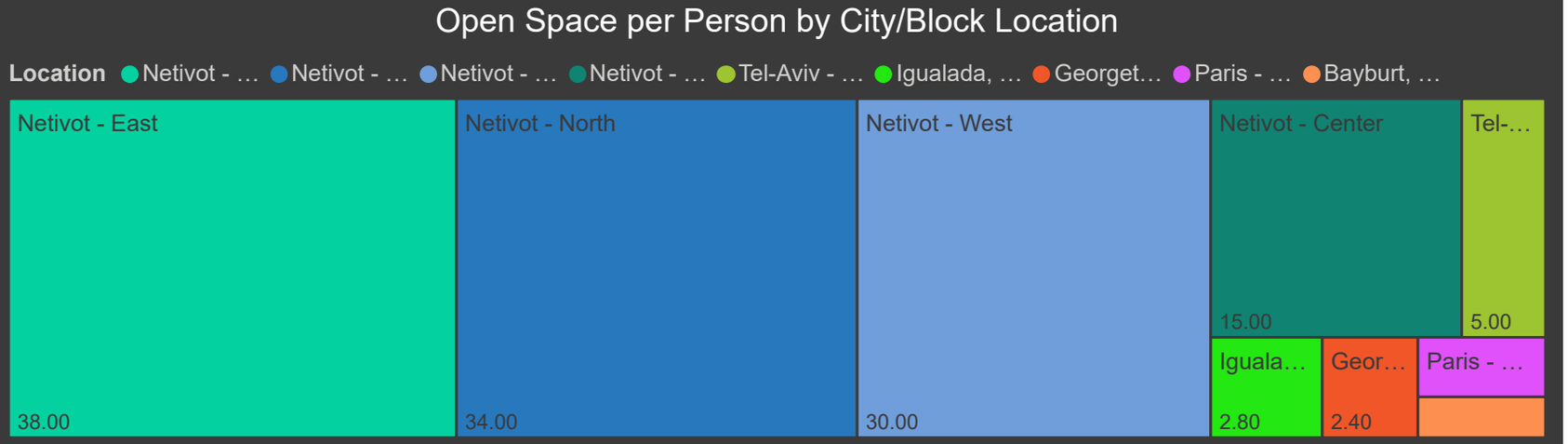
30,000
City population

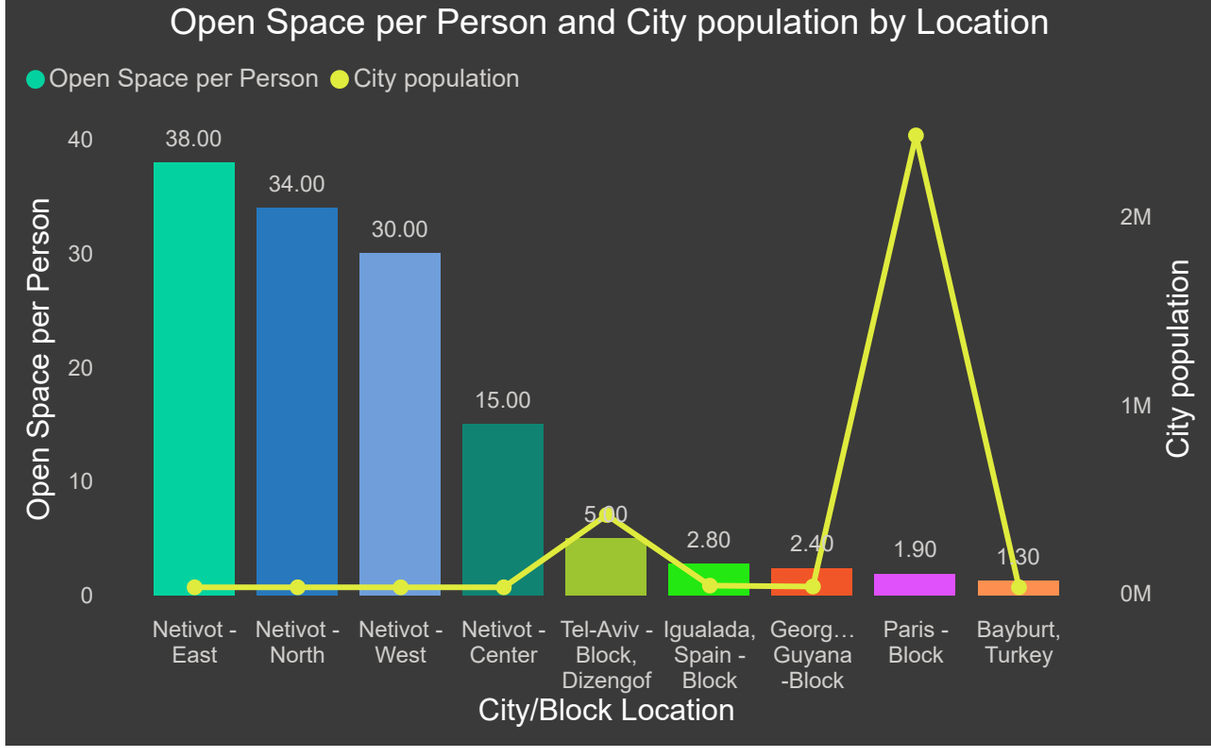
58.00
Open Space per Pers…

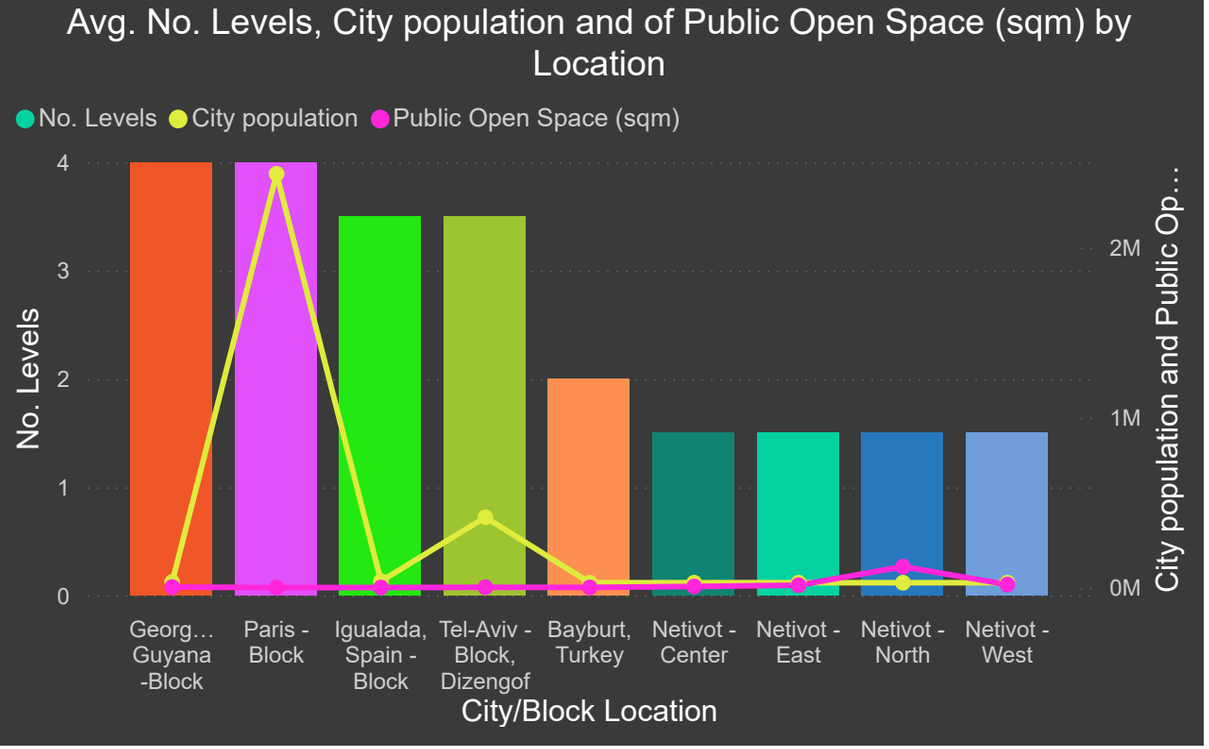
1,762,835
Public Open Spac…

4.04
Gross City area(km²)

1.50
Avg. No. of Levels

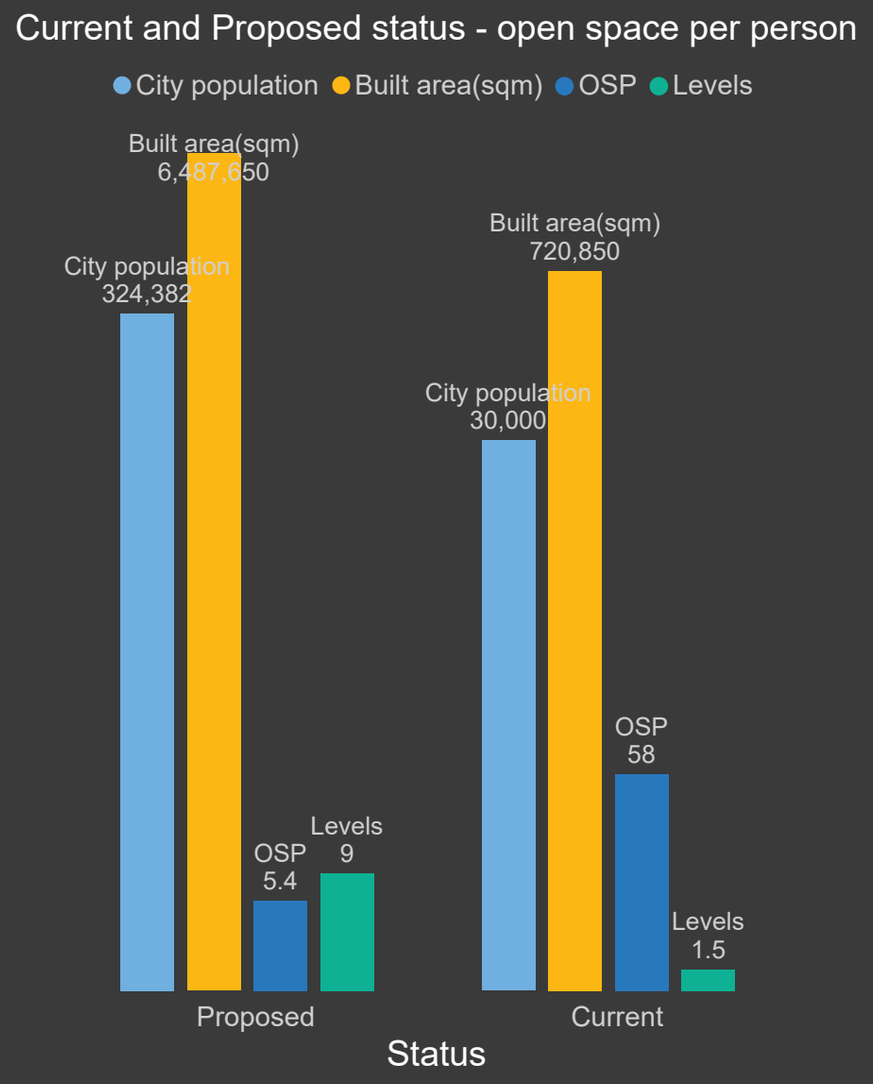


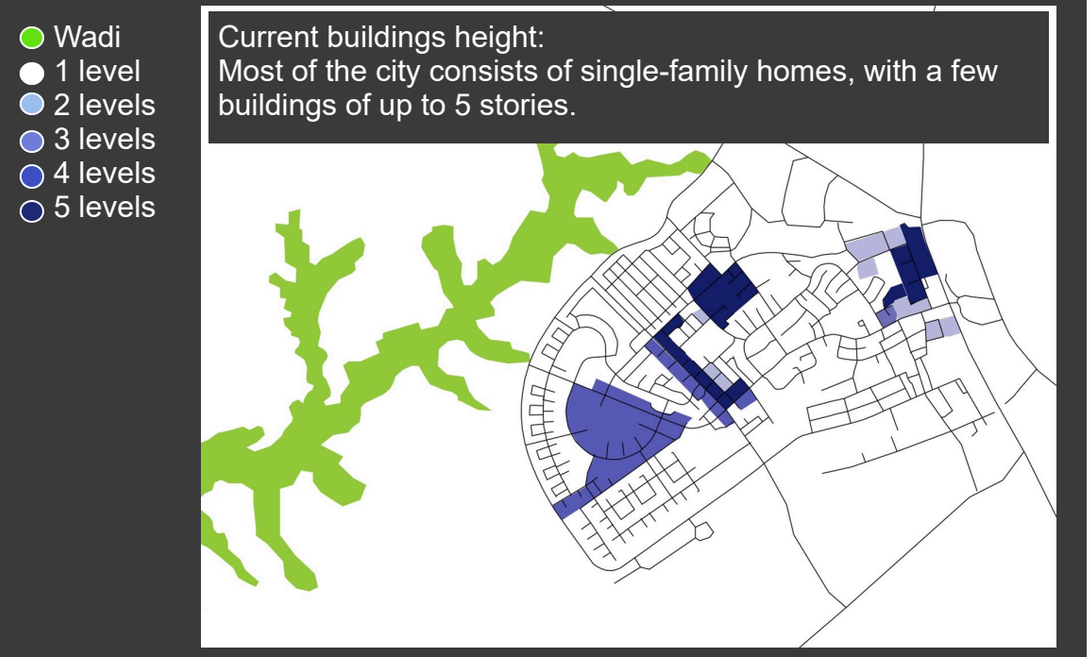


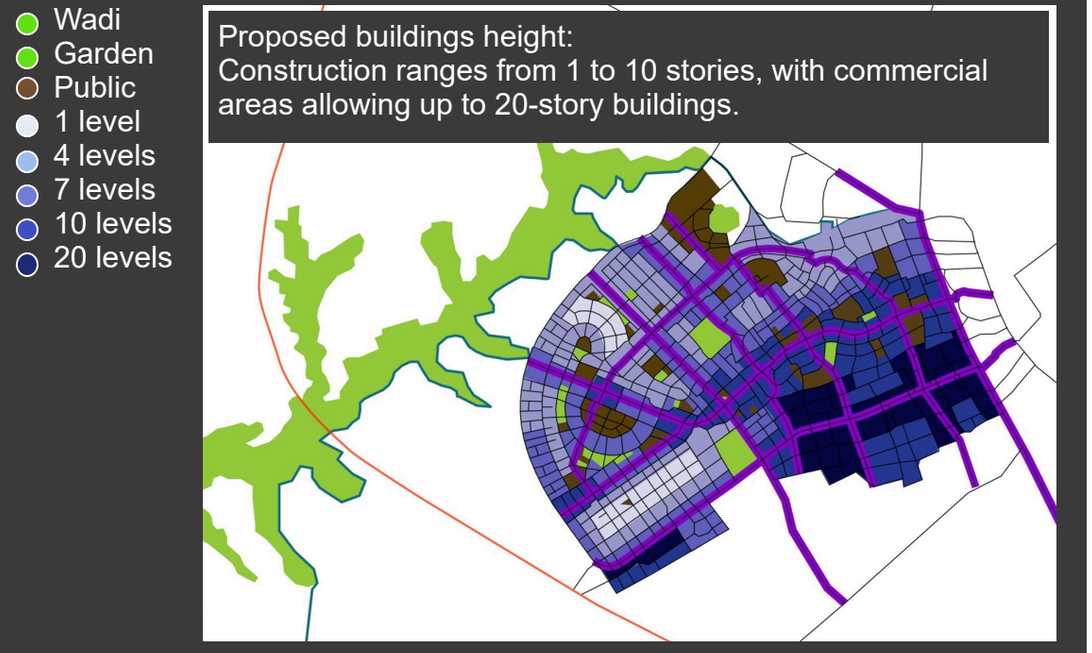


Public Density

Number of building levels

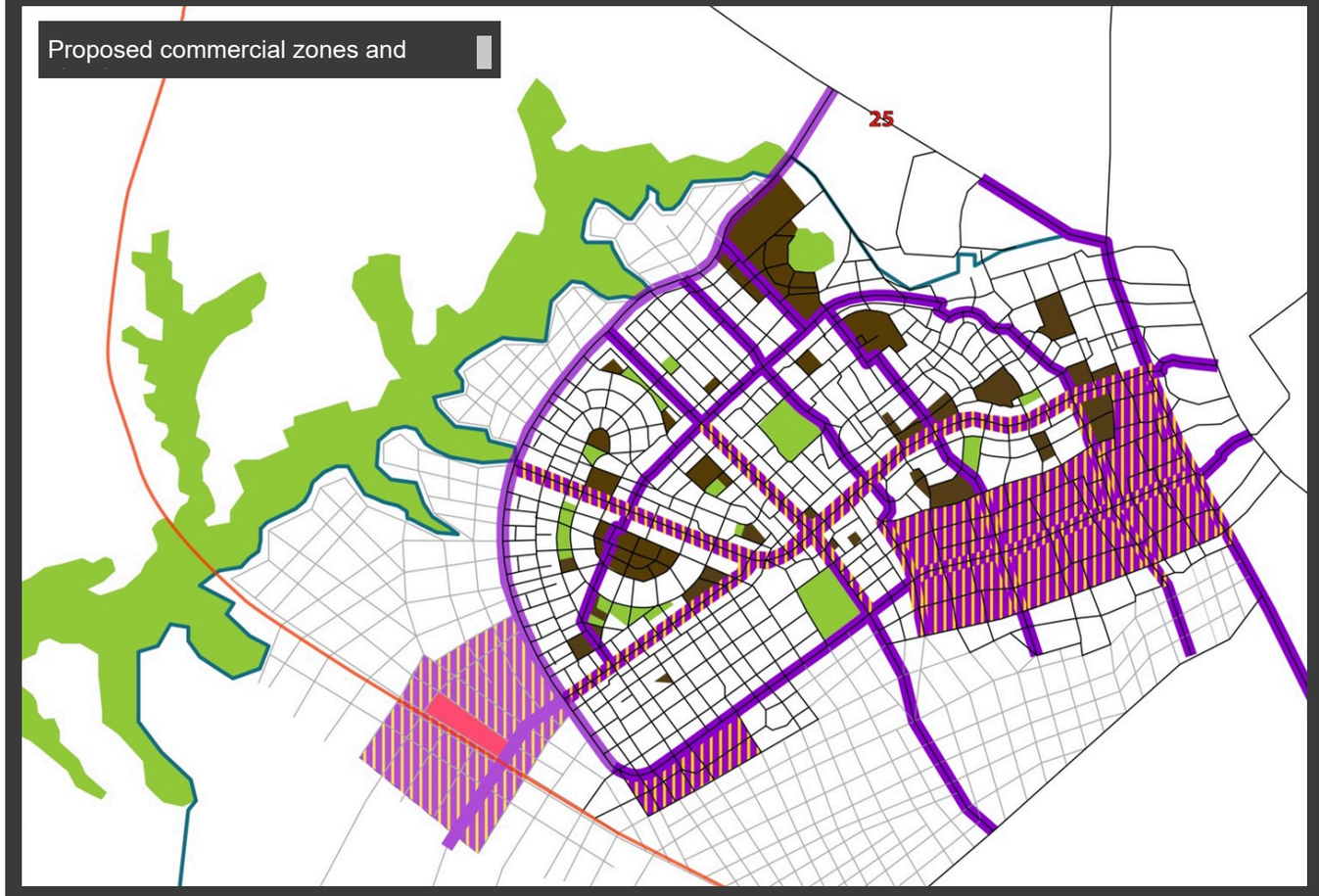






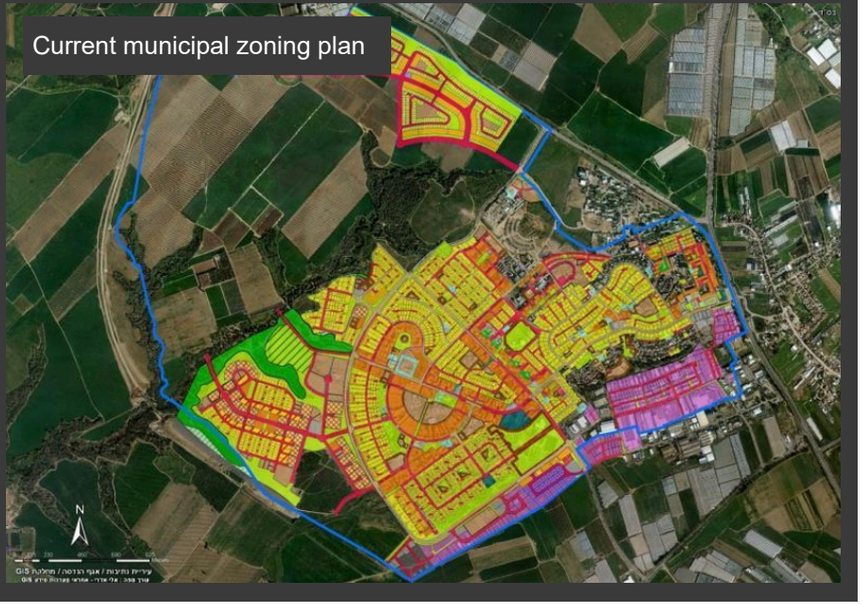
Mixed-use zones

Proposed
Defining mixed-use zoning along some of the main axes and the former industrial area. Adding commercial facades to main streets. Reducing public zones for residential and commercial use. Future development towards the railway area as a mixed-use zone.



- Wadi
- Garden
- Public
- Commercial
- Mixed use (commercial, residential, public)

Current
A clear separation between commercial and residential areas, reflecting a zoning phenomenon, with an abundance of green spaces and public buildings.



Key Insights

- Increasing construction rates and changing coverage will lead to an increase in density.
- Open spaces remain preserved, indicating sustainability planning.
- A continuous street grid and high density mixed-use development will create social connections and preserve the anonymity of residents.
- New mixed-use zones will encourage economic and urban vibrancy.

What I Learned

- Translating spatial plans into quantifiable data.
- Structuring manual data collection into analyzable format.
- Communicating urban planning outcomes through data storytelling.

Data Sources

- Municipal Zoning Plans
- City Planning Maps
- Central Bureau of Statistics
- Manual extraction of values from maps (area, housing units, zoning classification, etc.)

Special thanks to Architect Lir Danan