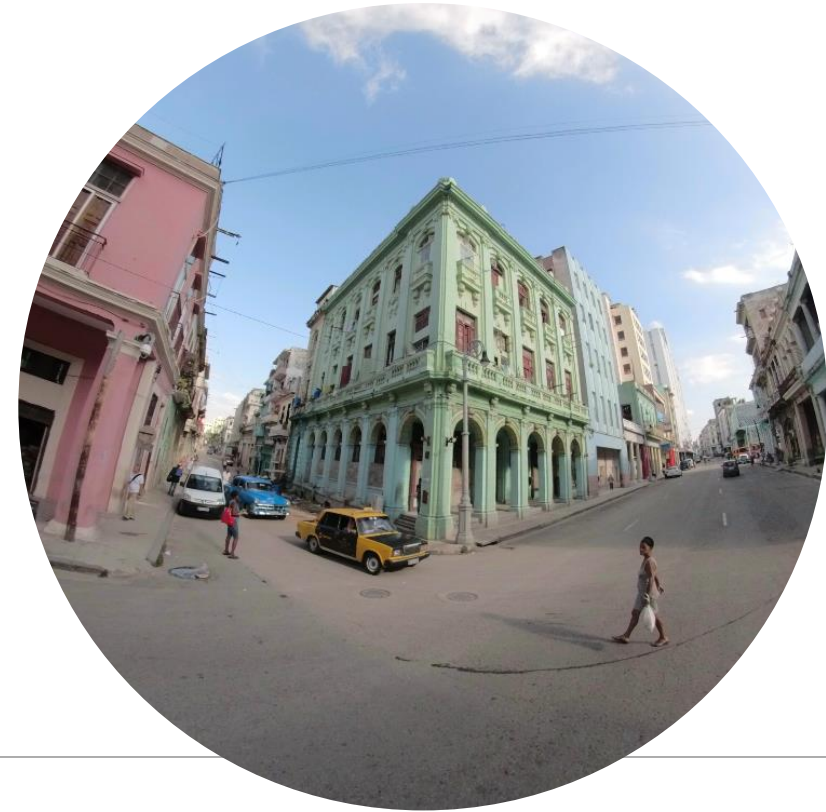


# MAS+ STEPS in Havana



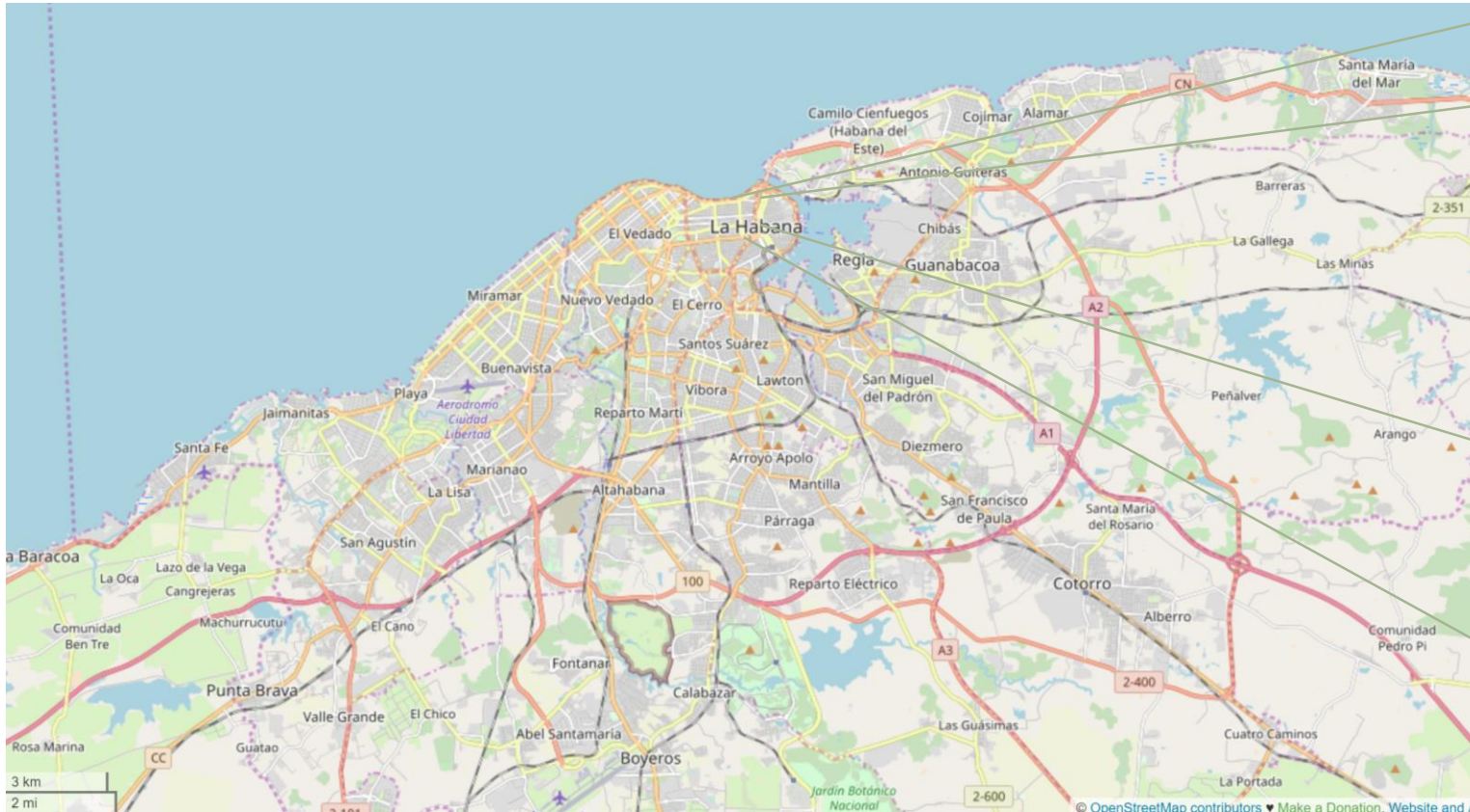
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STEPS –  
STREET ENVIRONMENTS FOR PEOPLE, SUSTAINABILITY AND HEALTH IN HAVANA  
FINAL SEMINAR. JULY 16TH 2019. LONDON, UK

# Outline

Citywide – Road network classification

Street Performance Assessment



Why (re)classify the  
road network?

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# Why (re)classify the road network

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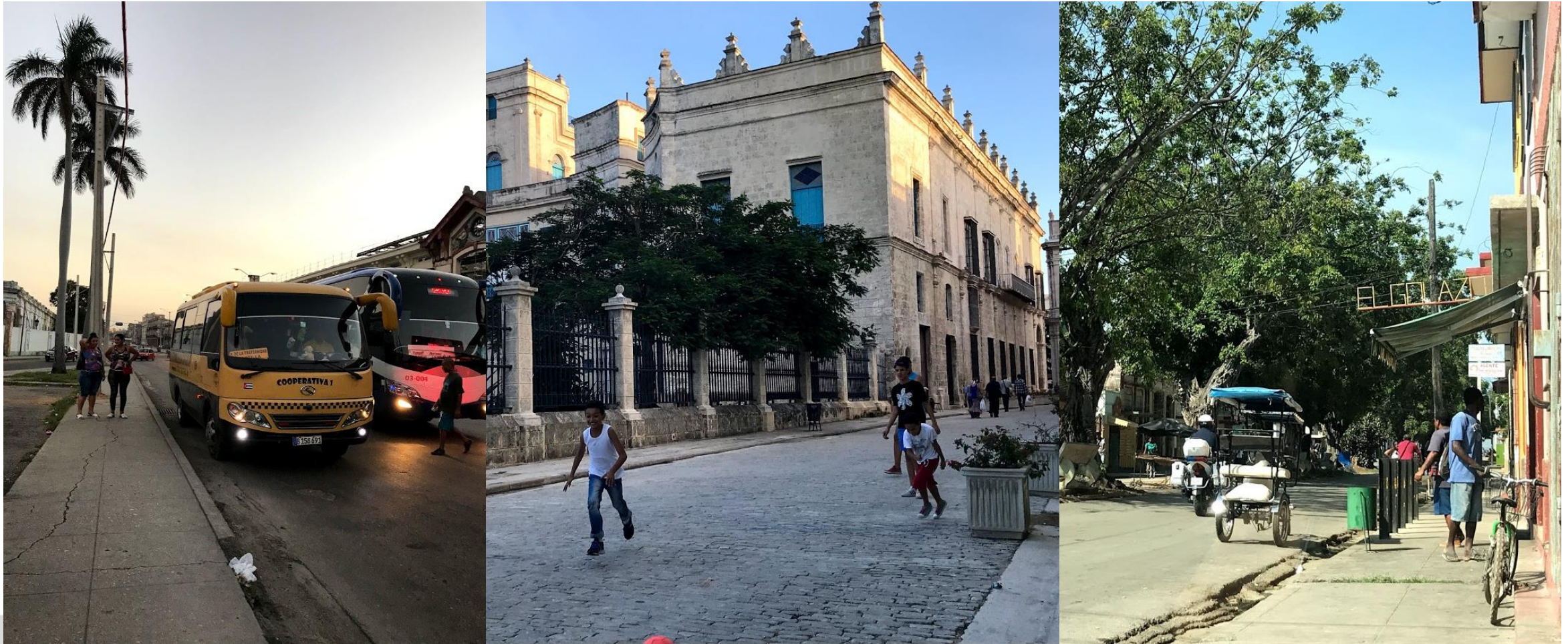
A classification that

1. Recognises **diverse users** = different needs = different functions
2. Promotes **Sustainability** (accessibility, active travel, low carbon transport, connectivity, economic vitality)
3. **People-centred** approach (liveability, quality of life, health and wellbeing)
4. **Systemic** approach

(Marshall, 2002)



# Diverse users= diverse functions/Sustainability





# People-centred and Systemic



0 – 3.2 km/hr



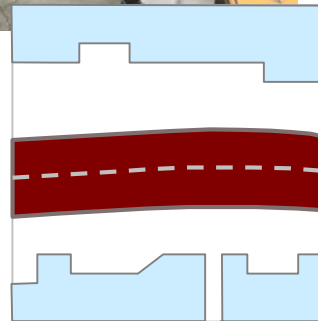
40 - 60 km/hr

# New Classification- Dual Function: Movement and Place



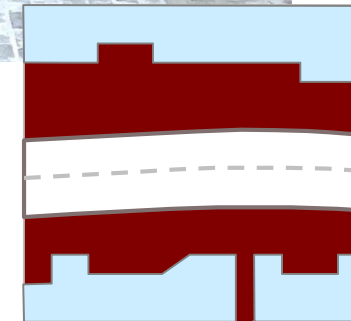
**MOVEMENT**  
As a conduit for  
movement  
(including non-  
motorized)

**SAVE  
TIME**



**PLACE**  
As a destination

**SPEND  
TIME**



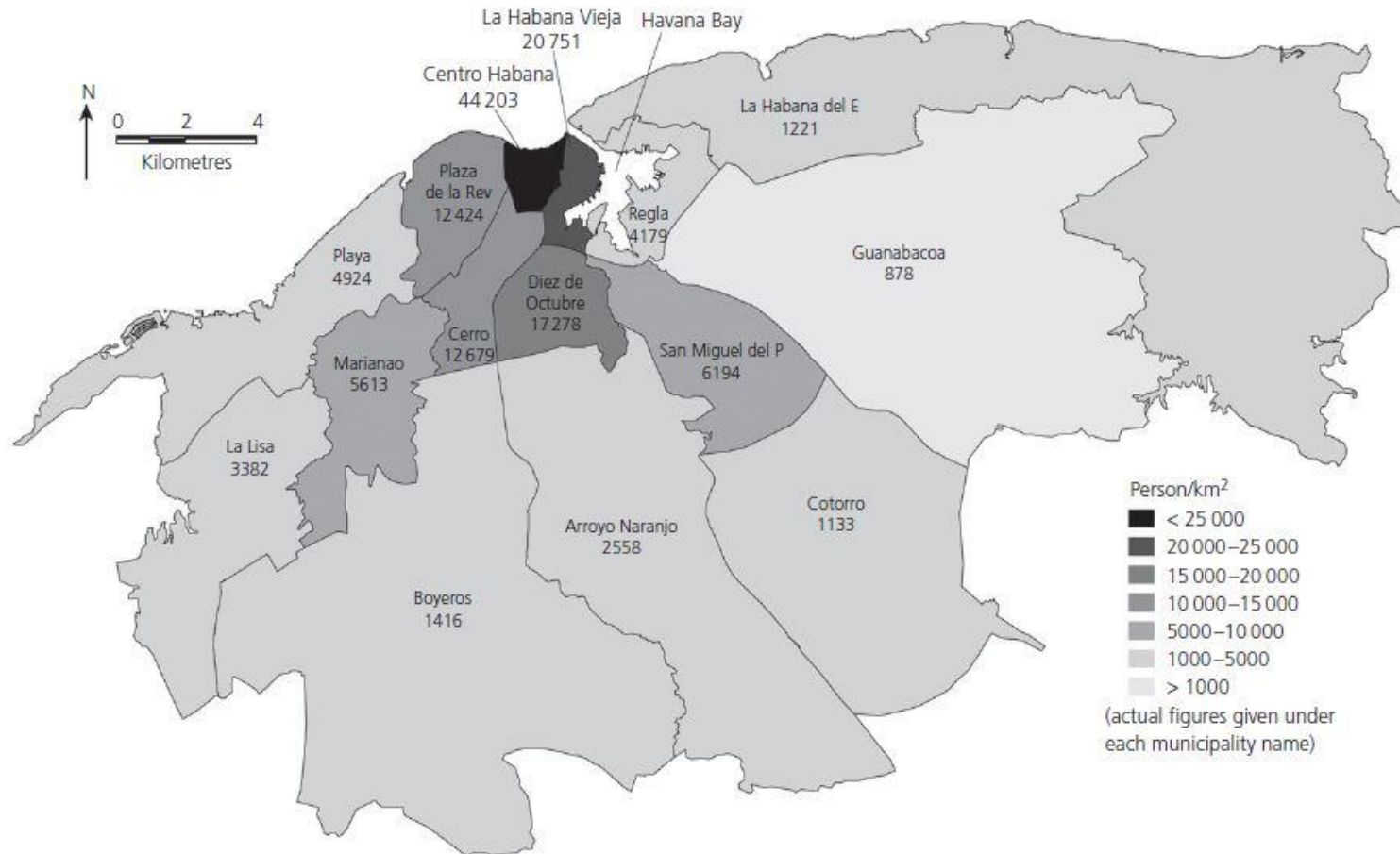


M1	National	<ul style="list-style-type: none"> <li>- Link is part of national routes</li> <li>- Connects main cities (enables people or goods movement)</li> </ul>
M2	City	<ul style="list-style-type: none"> <li>- Link is part of the major routes within the city, such as city radial route or key strategic route across the city,</li> <li>- Connects municipalities</li> <li>- Connects centres and subcentres</li> </ul>
M3	Municipality	<ul style="list-style-type: none"> <li>- Enable movement of people and goods within the municipality</li> </ul>
M4	Neighbourhood /Residential	<ul style="list-style-type: none"> <li>- Local streets primarily for access, residential streets, service lanes</li> </ul>





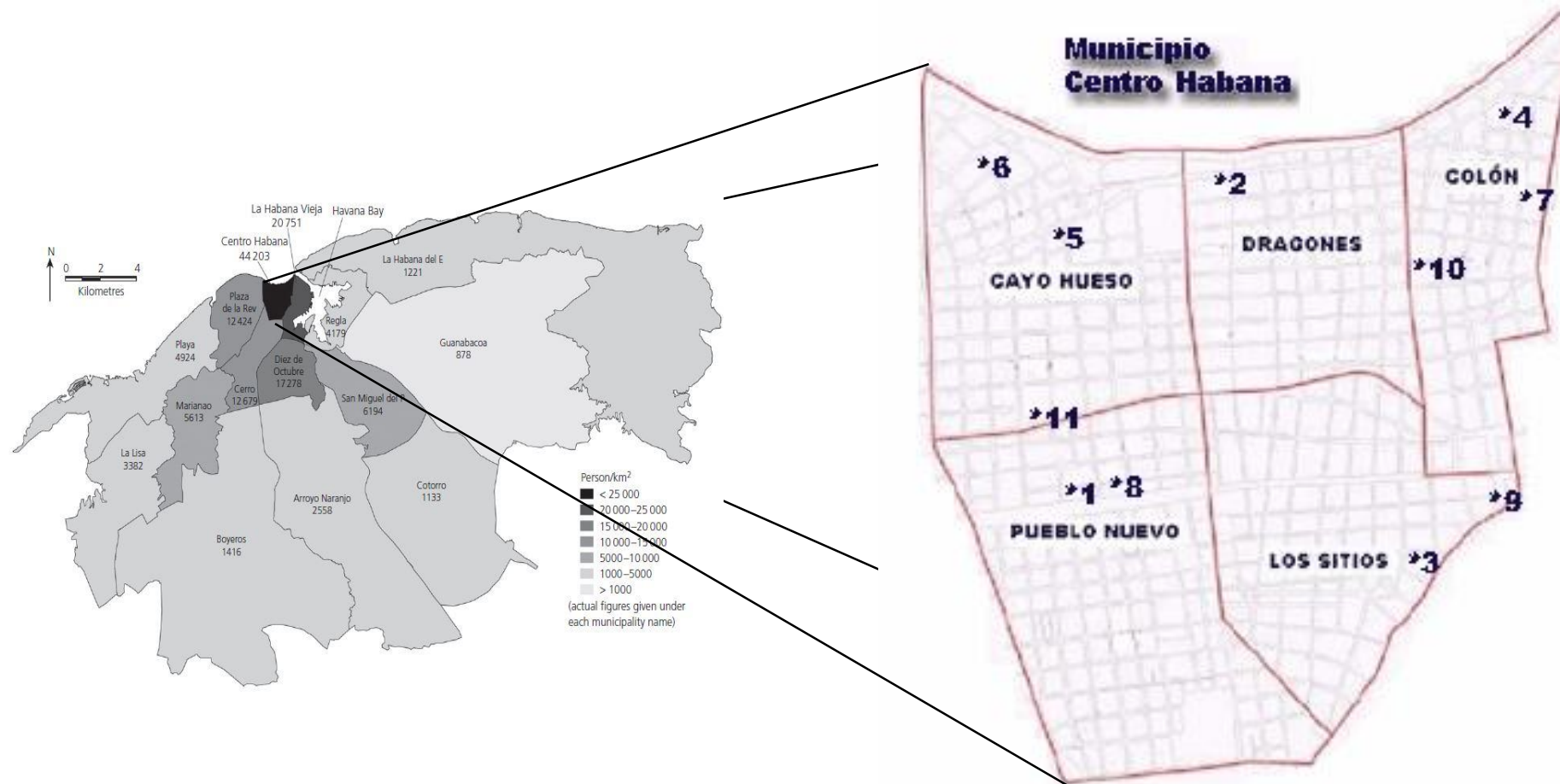
# 2 - City



Warren & Ortegon (2015)



# 3 – Municipality / 4- Neighbourhood



# Method





# Results

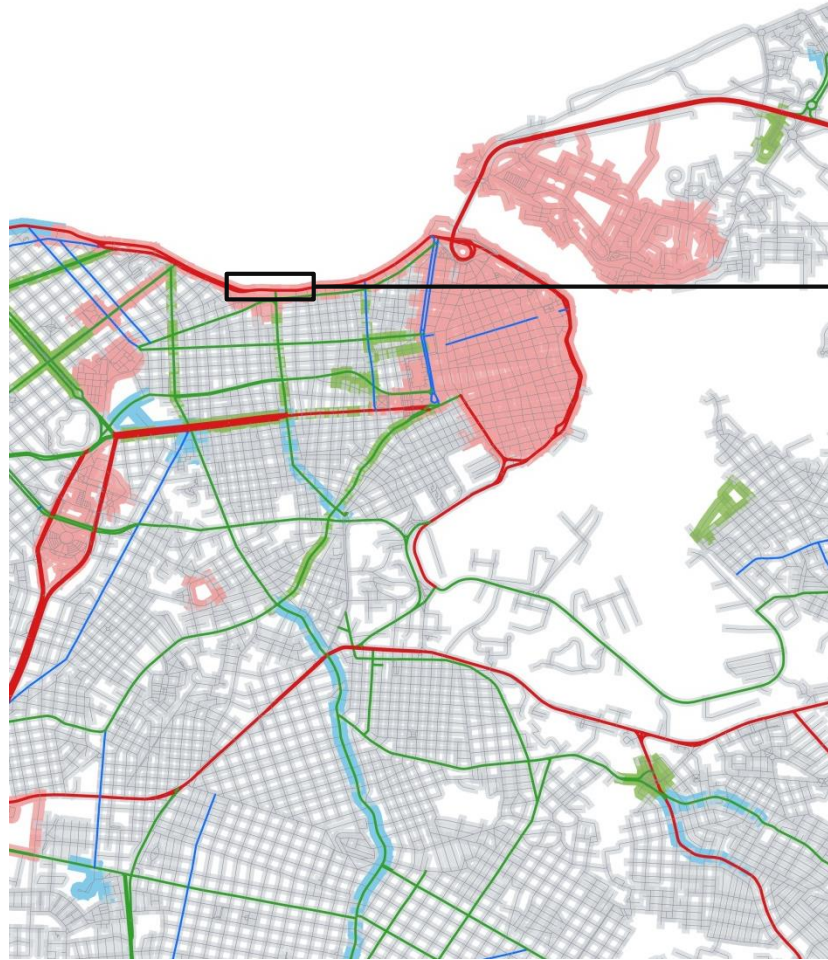
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# A new road/street classification for Havana





# M1-P1 Example



# Conclusions and further research

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- Currently, movement and place classifications are related to people's use, not to the characteristics of the built environment or road geometry
- Important to explore consistency between function and road/built environment design (by assess performance of links and places)
- Need to study spatial/social disparities and how links and places form a network



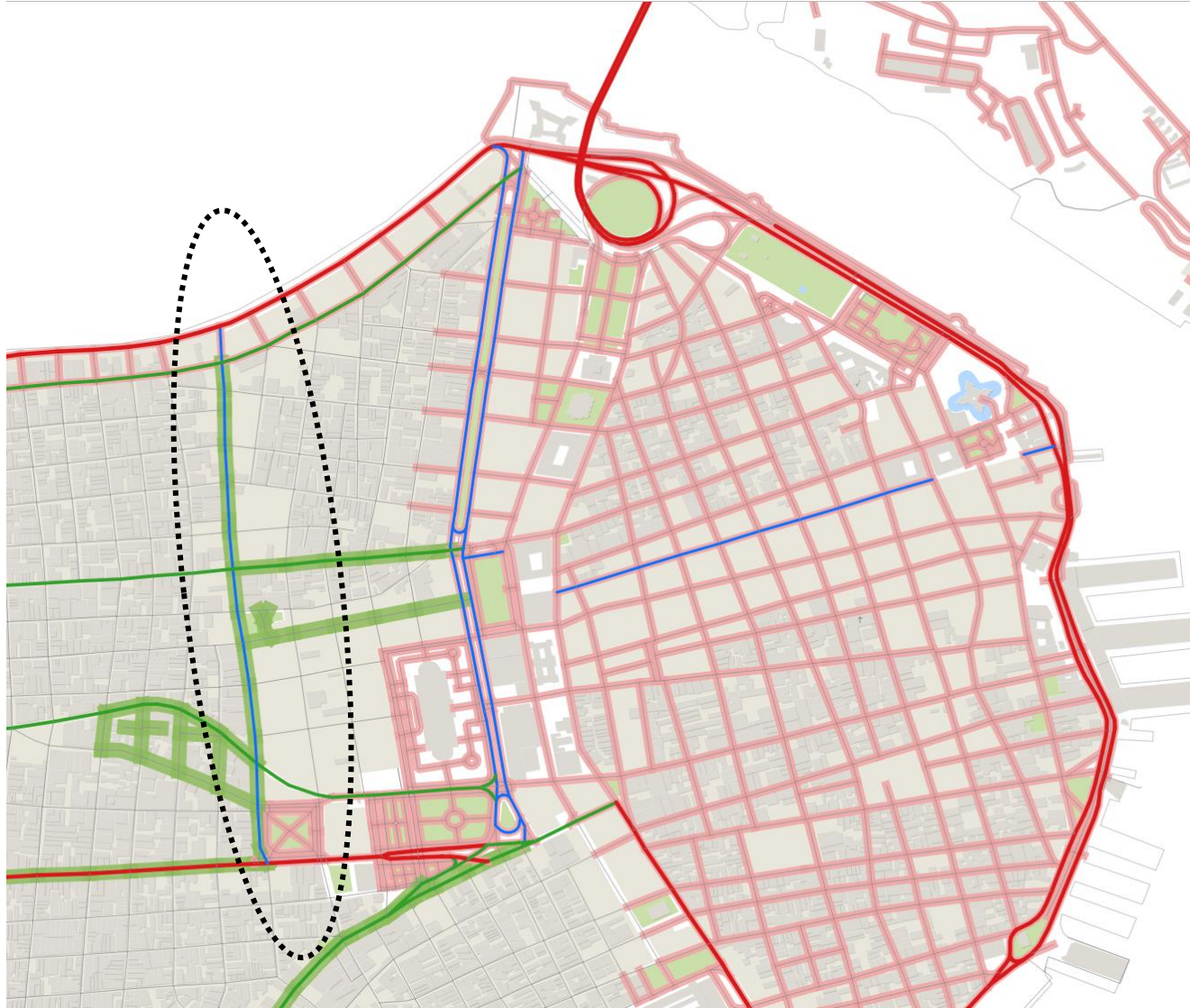
# Galiano High Street Performance Assessment

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How to assess if users  
needs are being  
addressed?

- Case study -

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# Galiano

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- High Street with historical/heritage value
- M3P2 and 'connecting' strategic M1P1 streets: Curita Park (intermodal transfer station) and Malecon (sea front)
- Connected to Old Havana via pedestrian street
- Diversity of land-uses, services and activities (perhaps not captured by the city-wide classification?)



# Method



2 groups

~ 13 survey points

23 questions (self-  
selfcompeted)

1 – 10 Likert scale

Larger values = More  
positive performance

22 participants

# Method: Street Environment for People



Source: Lucy Saunders

The aim is to assess perceived:

- Walking physical built environment (pavement width, crossing)
- Place physical built environment (rest, shelter)
- Use/behavior condition (traffic, noise, air, cleanliness)
- Design based in Healthy Streets Indicators (Saunders) widely used in London and comprehensive
- Adapted to local conditions: pavement and colonnades



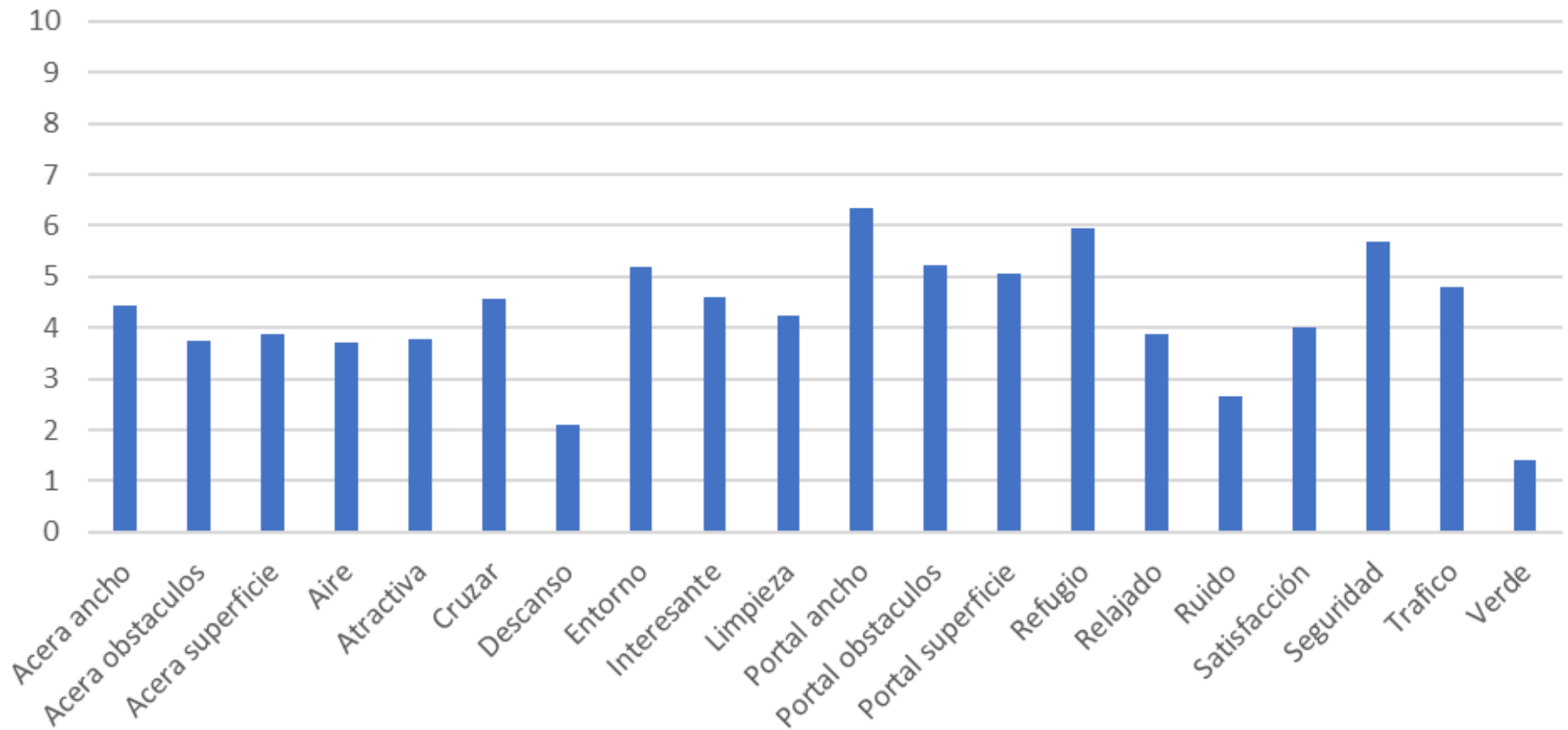


# Results

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Average of Value

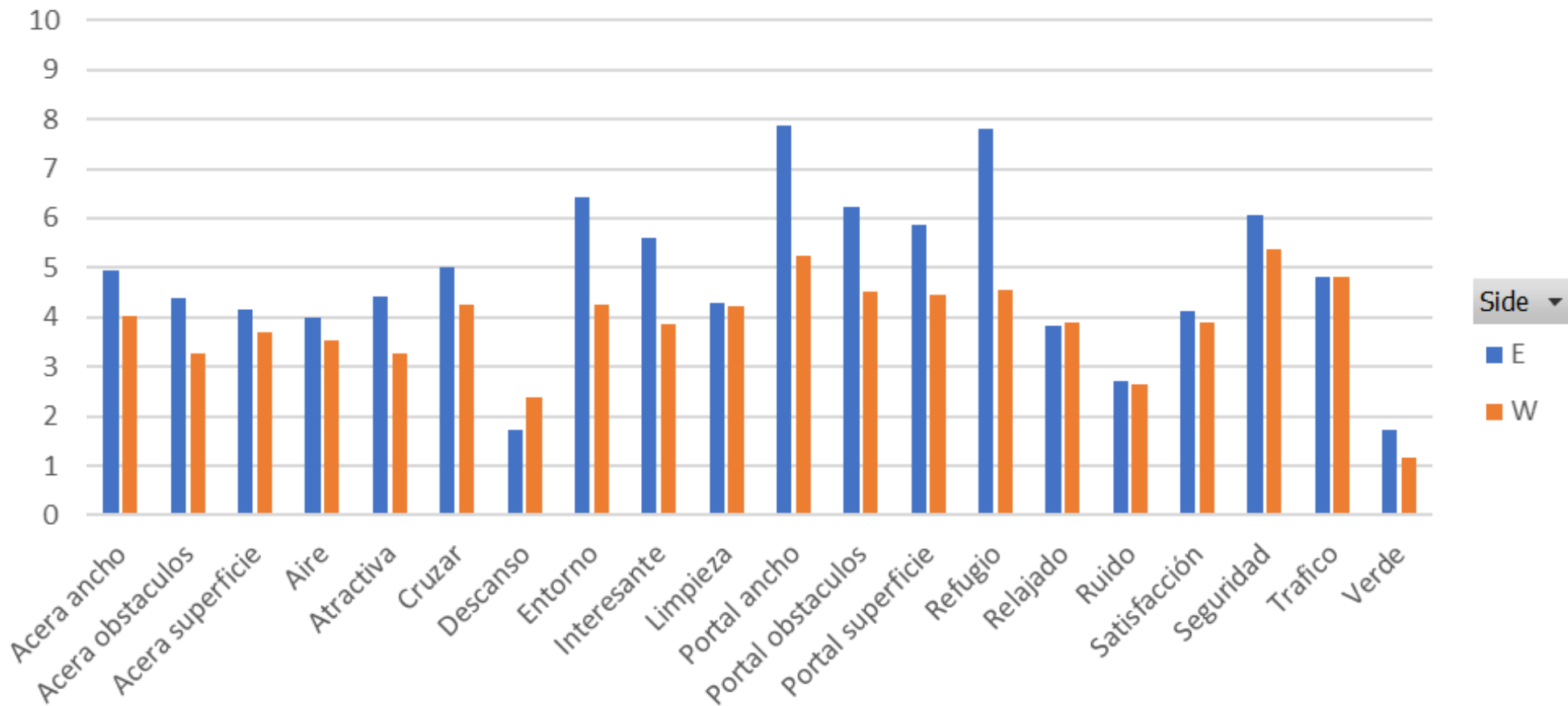
### Promedio por tema - todos los puntos



Label ▾

Average of Value

### Promedio por tema - todos los puntos



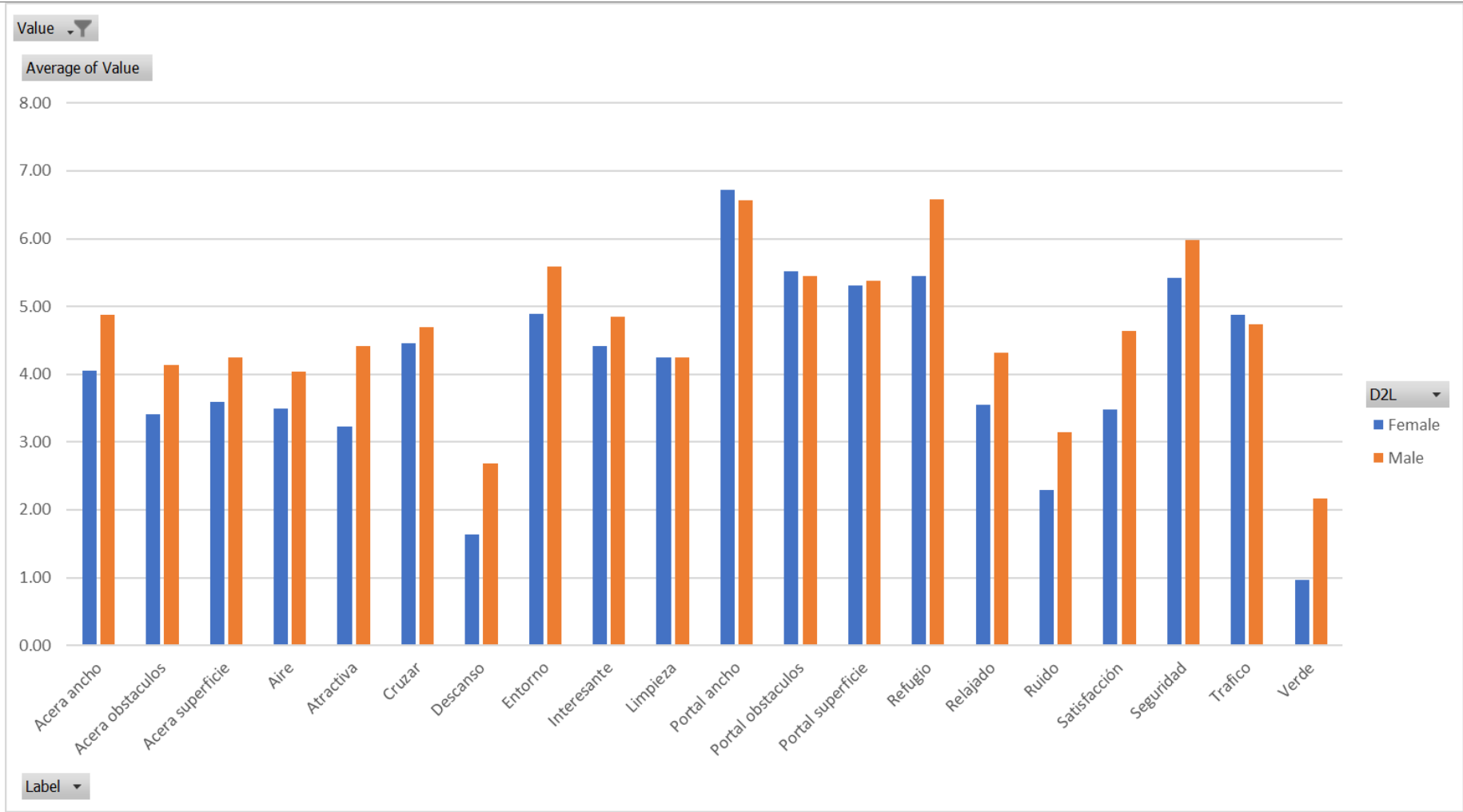
Label

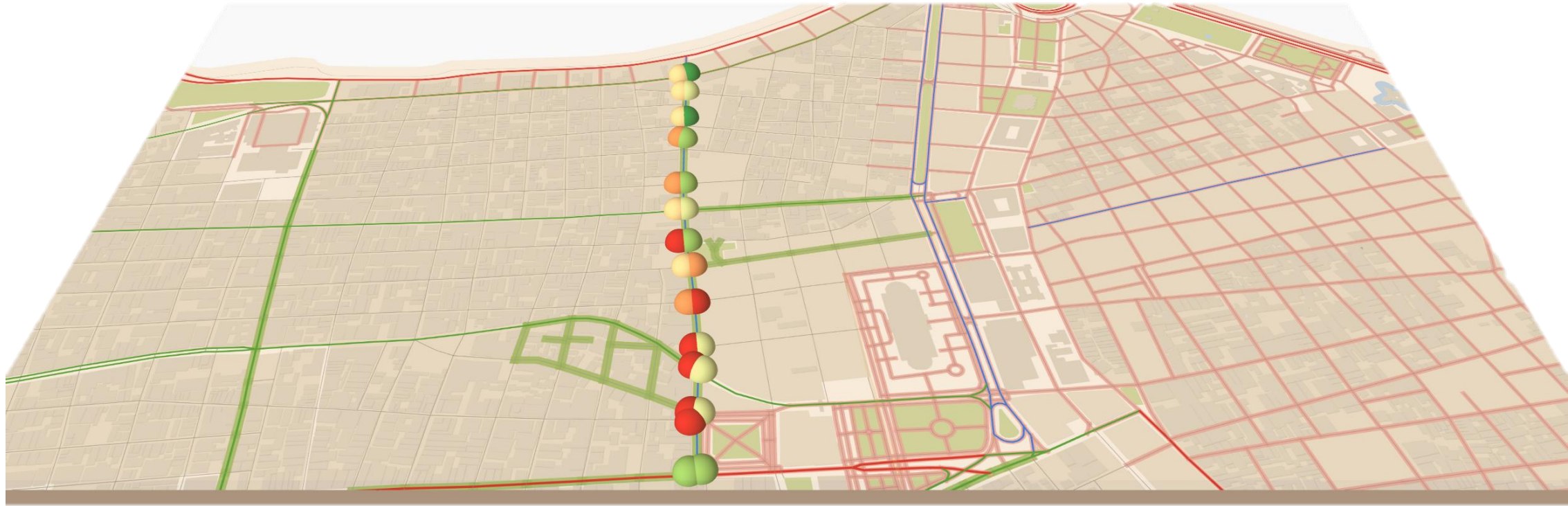
Side

- E
- W









# w2

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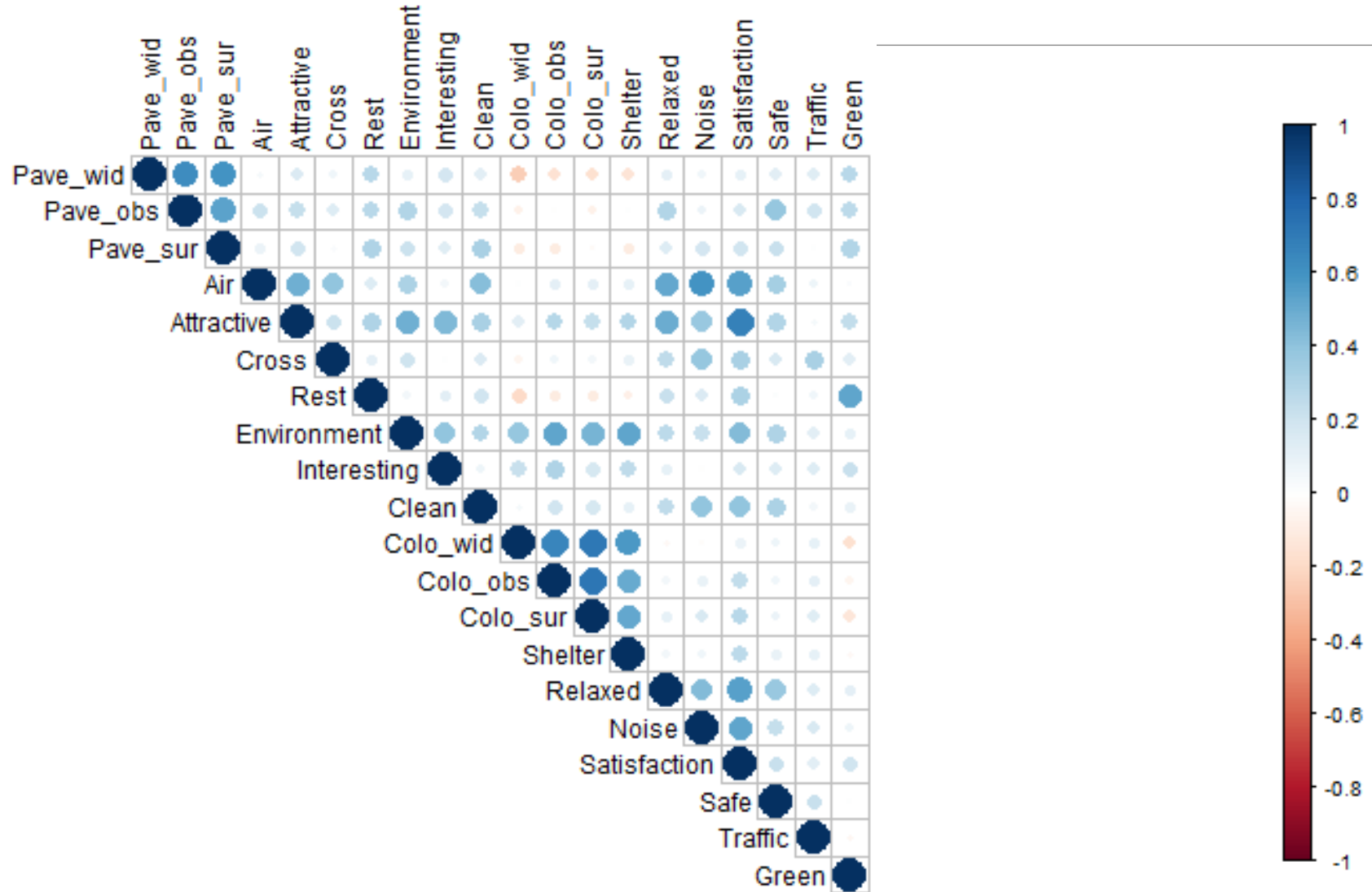




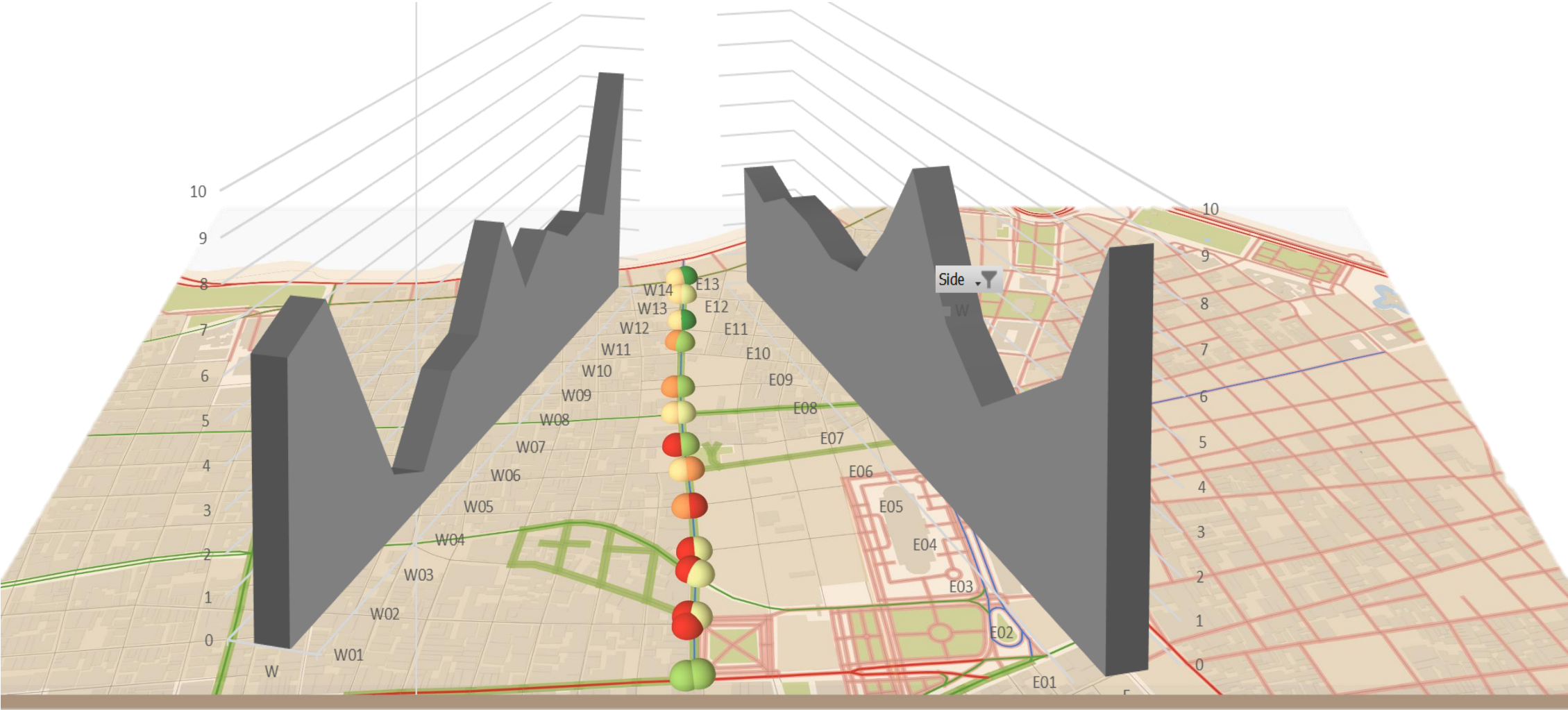
e5



### Correlation Matrix



# Pavement width

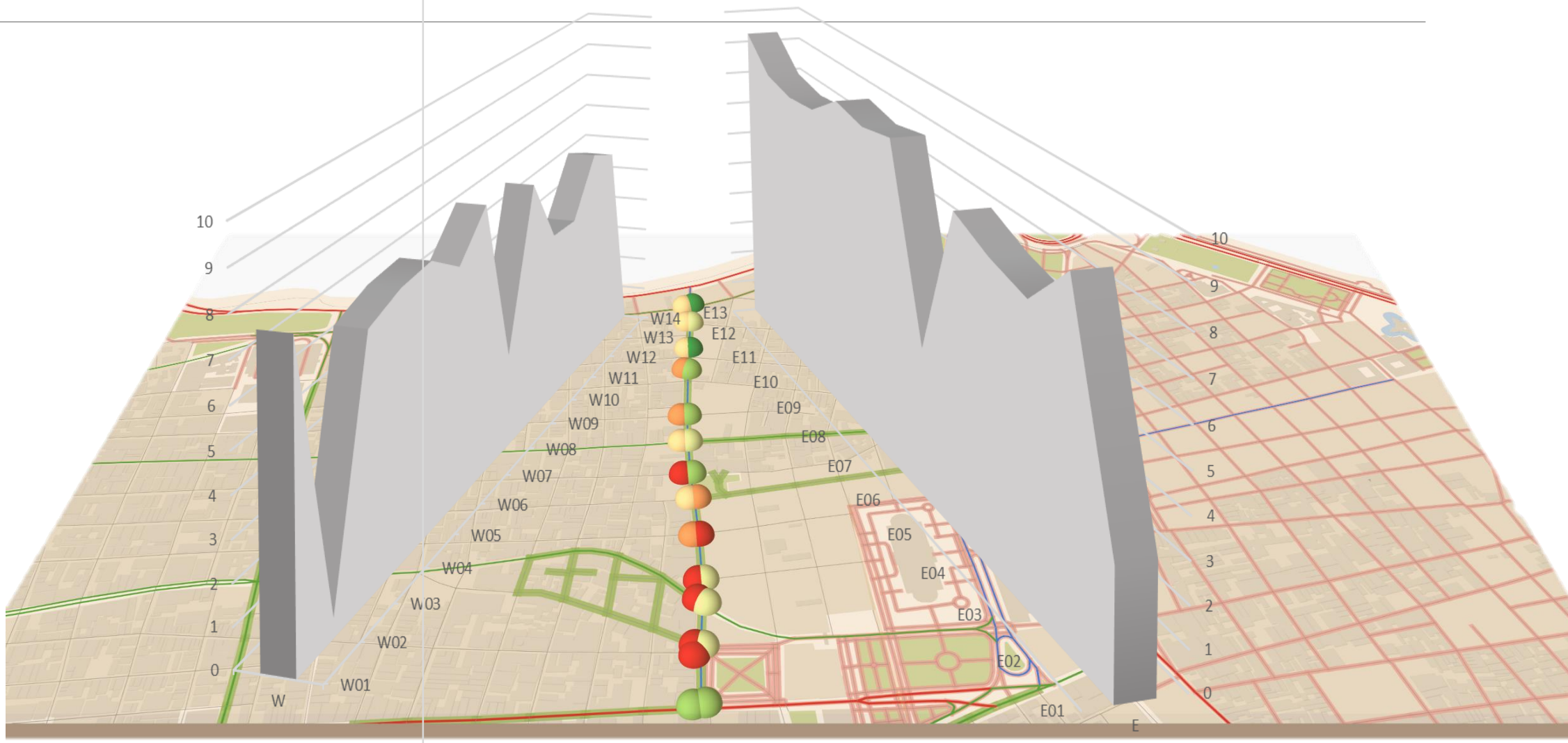




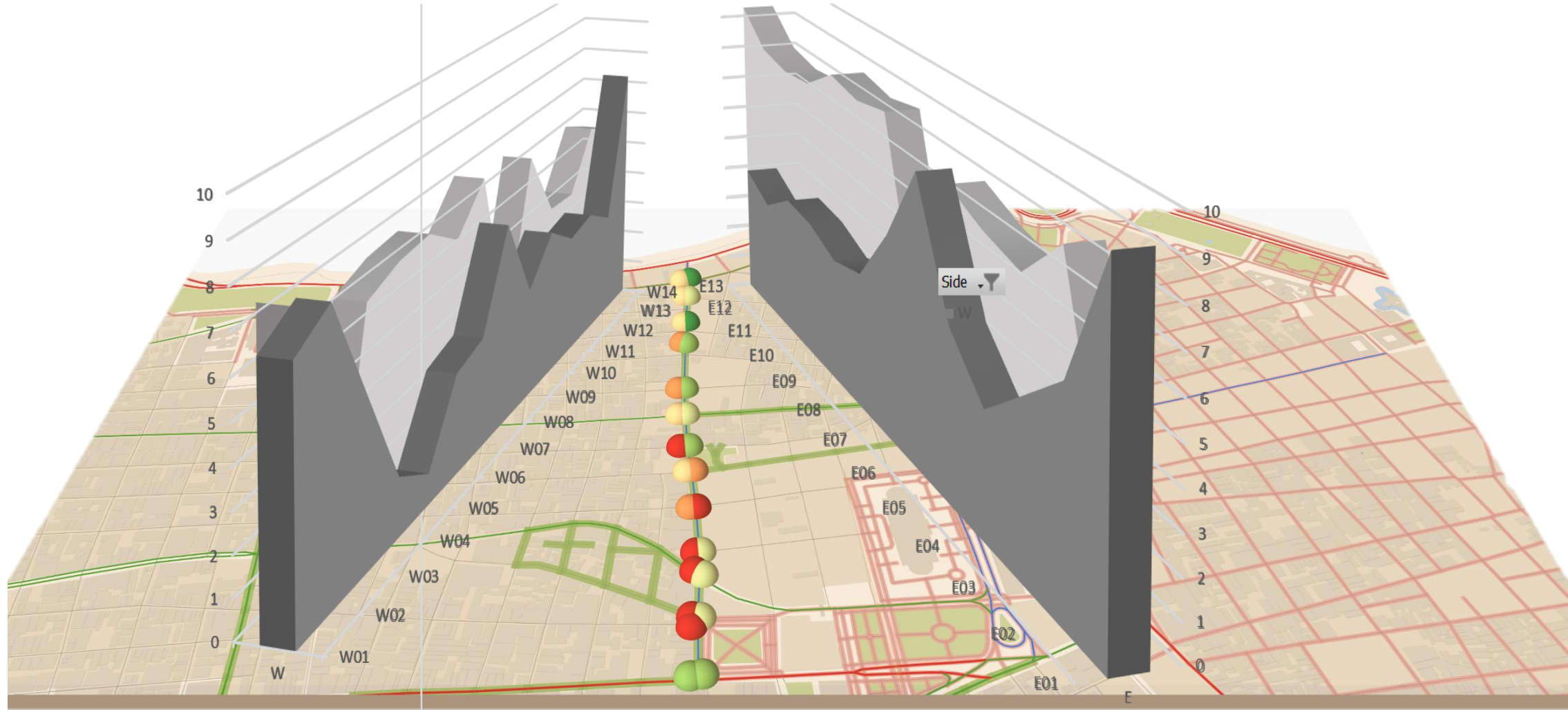




# Colonnade width

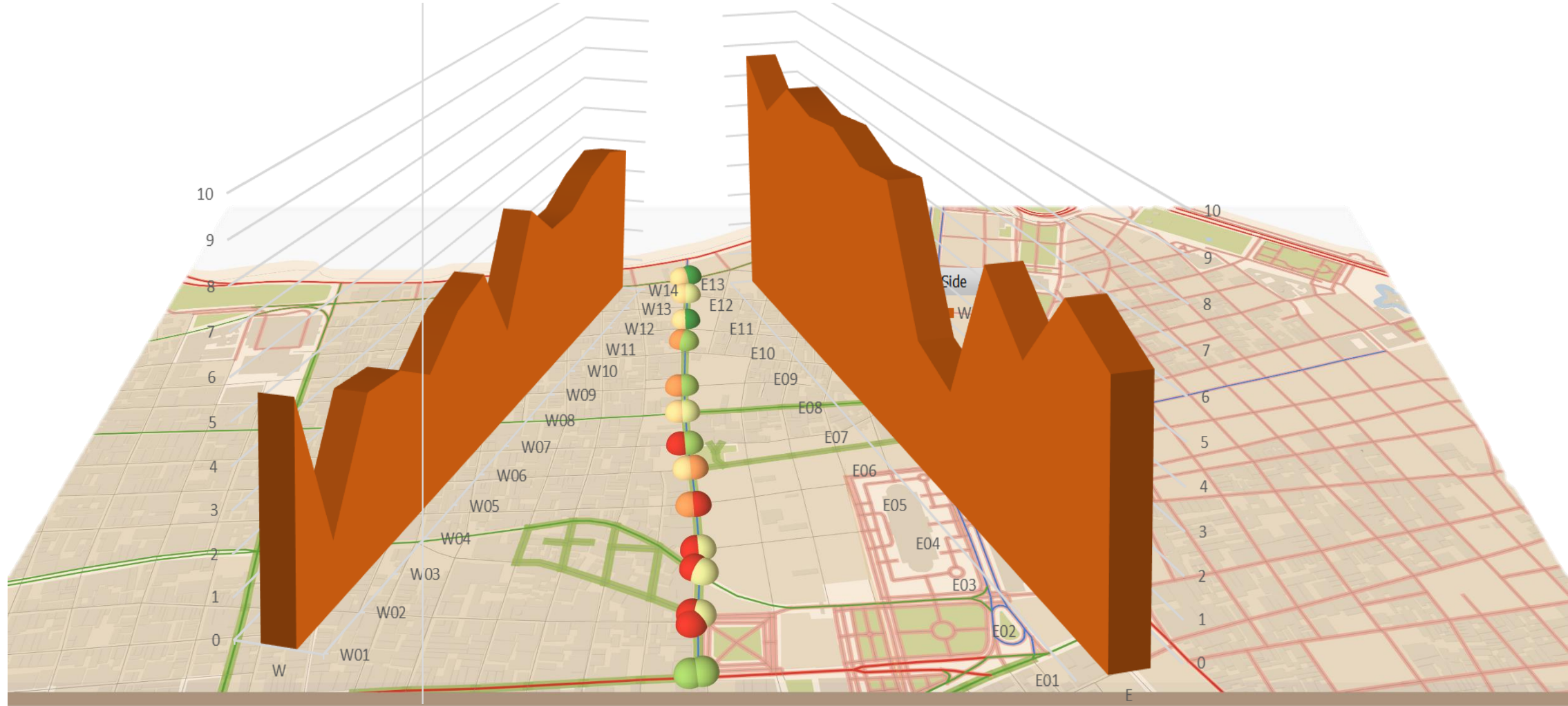


# Pavement and Colonnade width

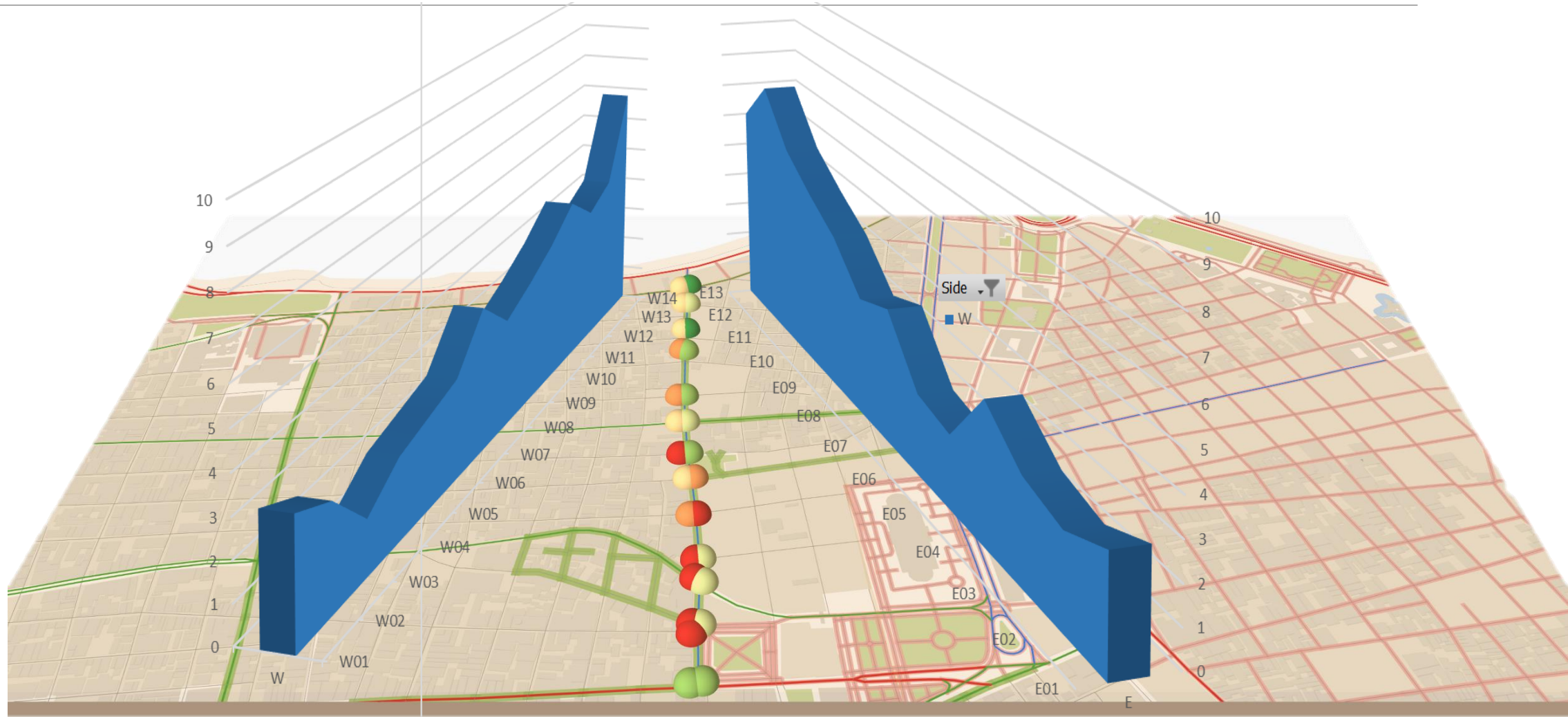




# Walking Environment



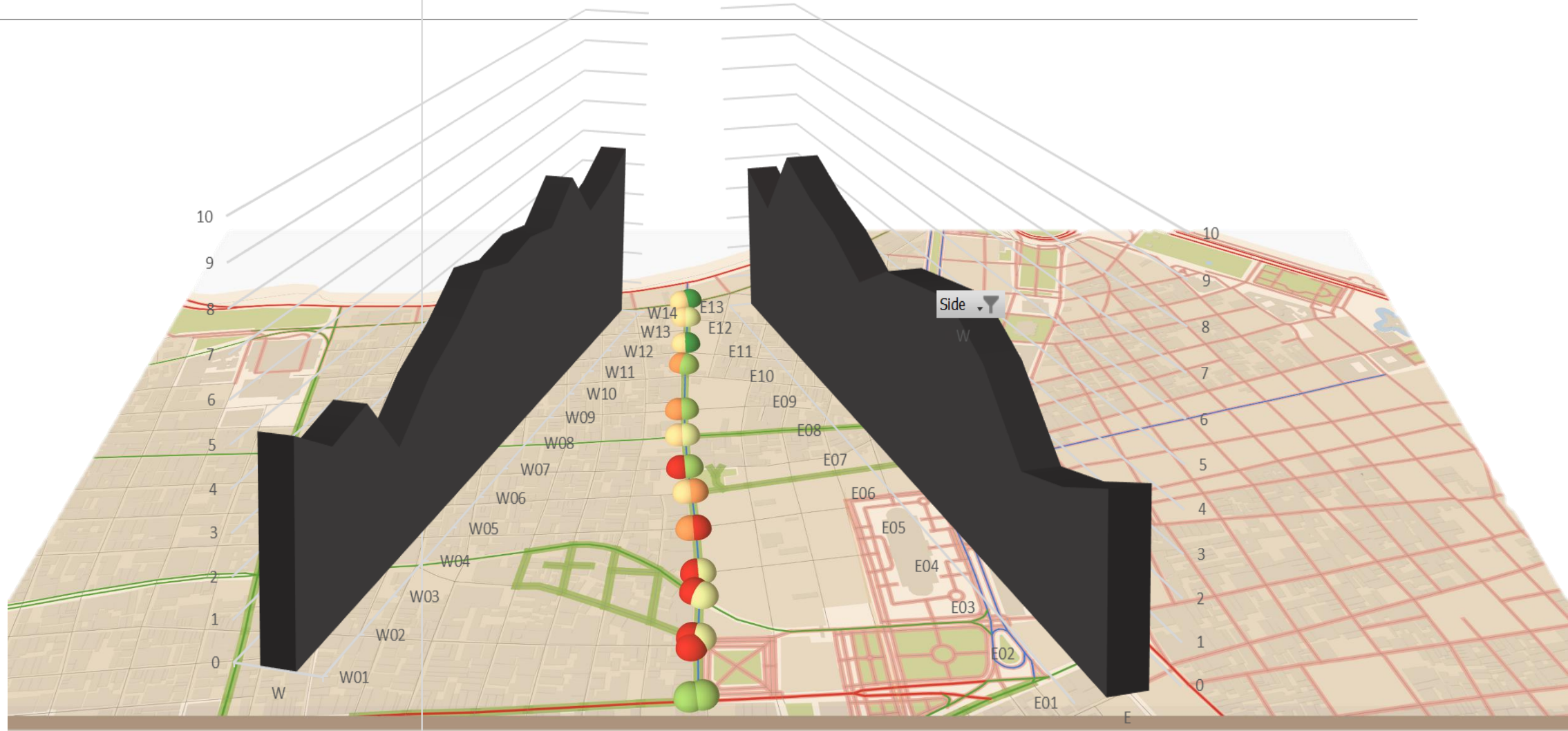
# Air quality



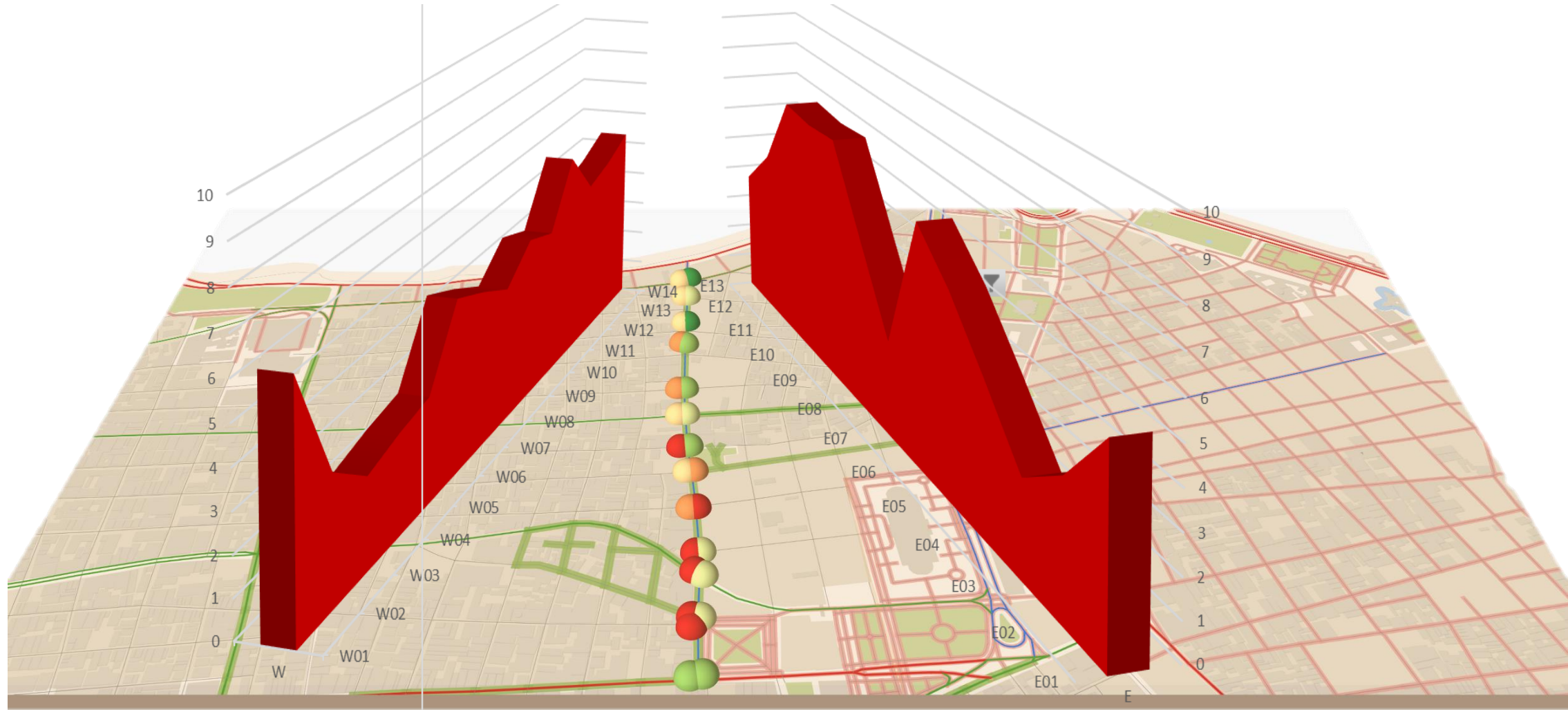




# Free from traffic

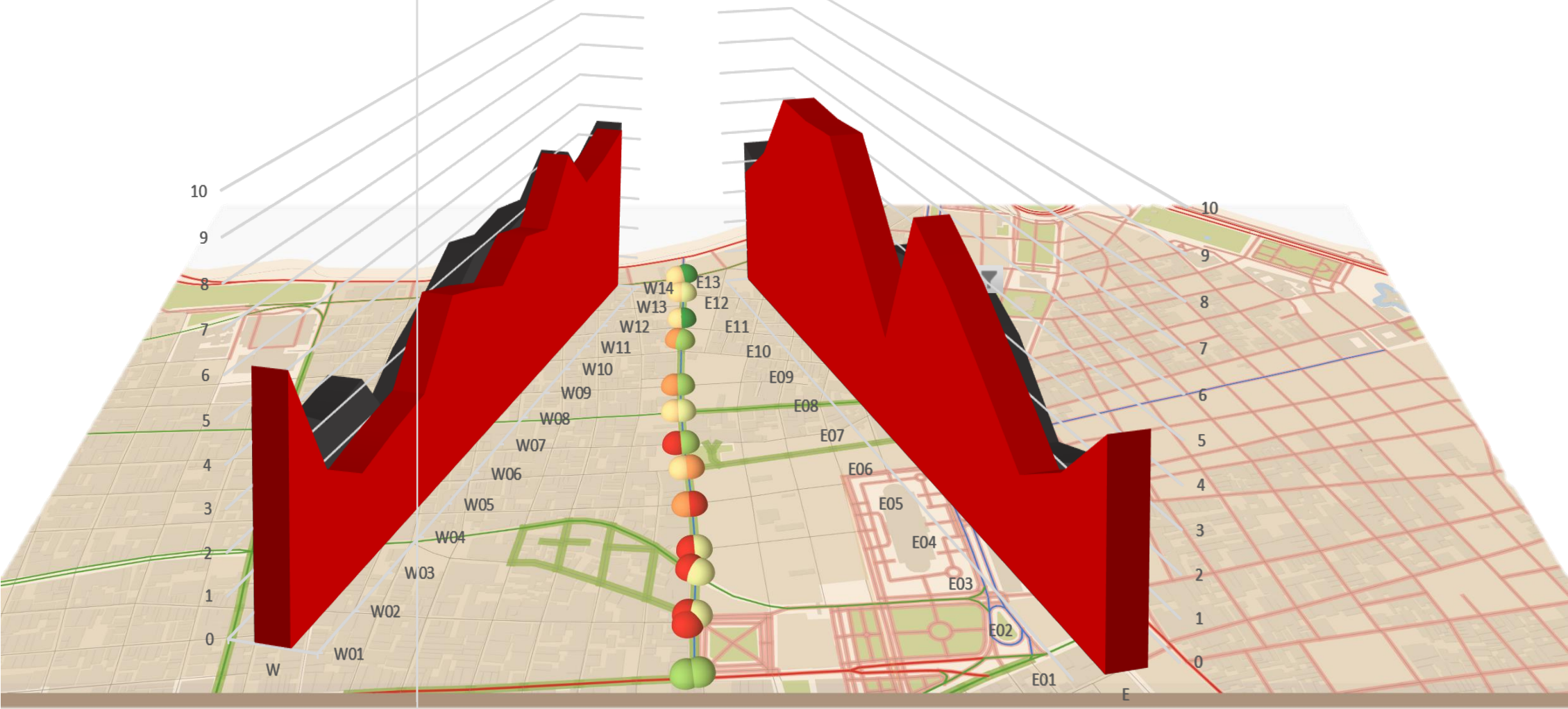


# Easy to Cross



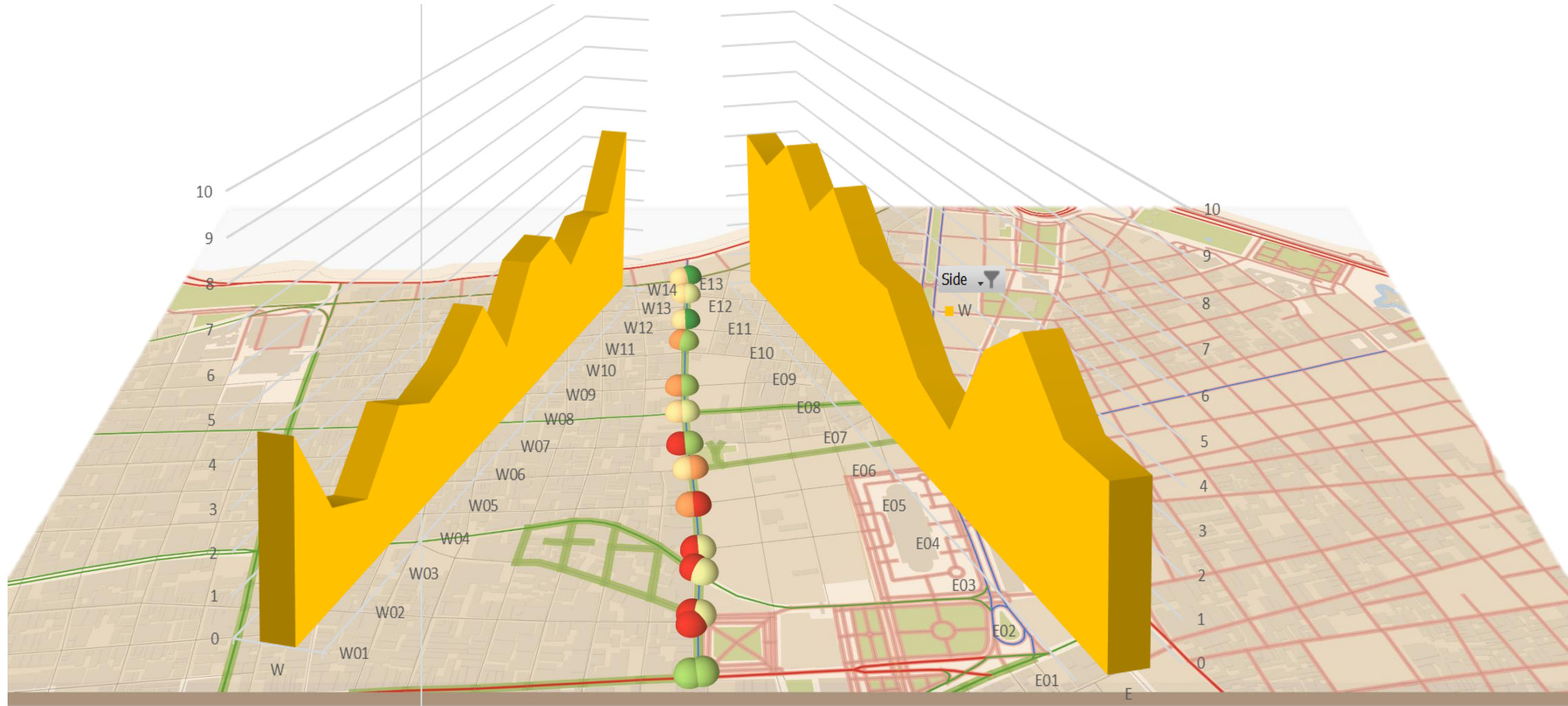


# Free from Traffic and Easy to Cross

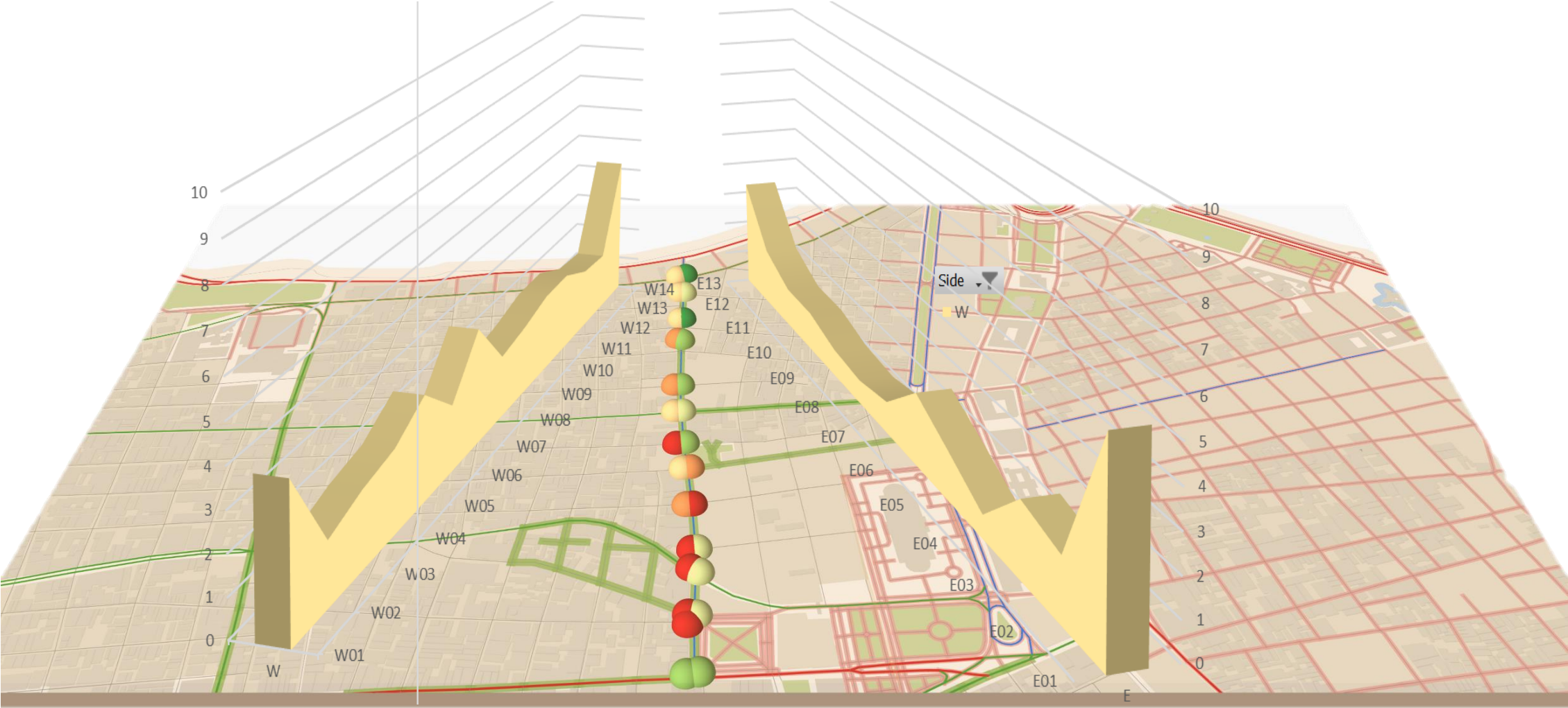




# Attractive

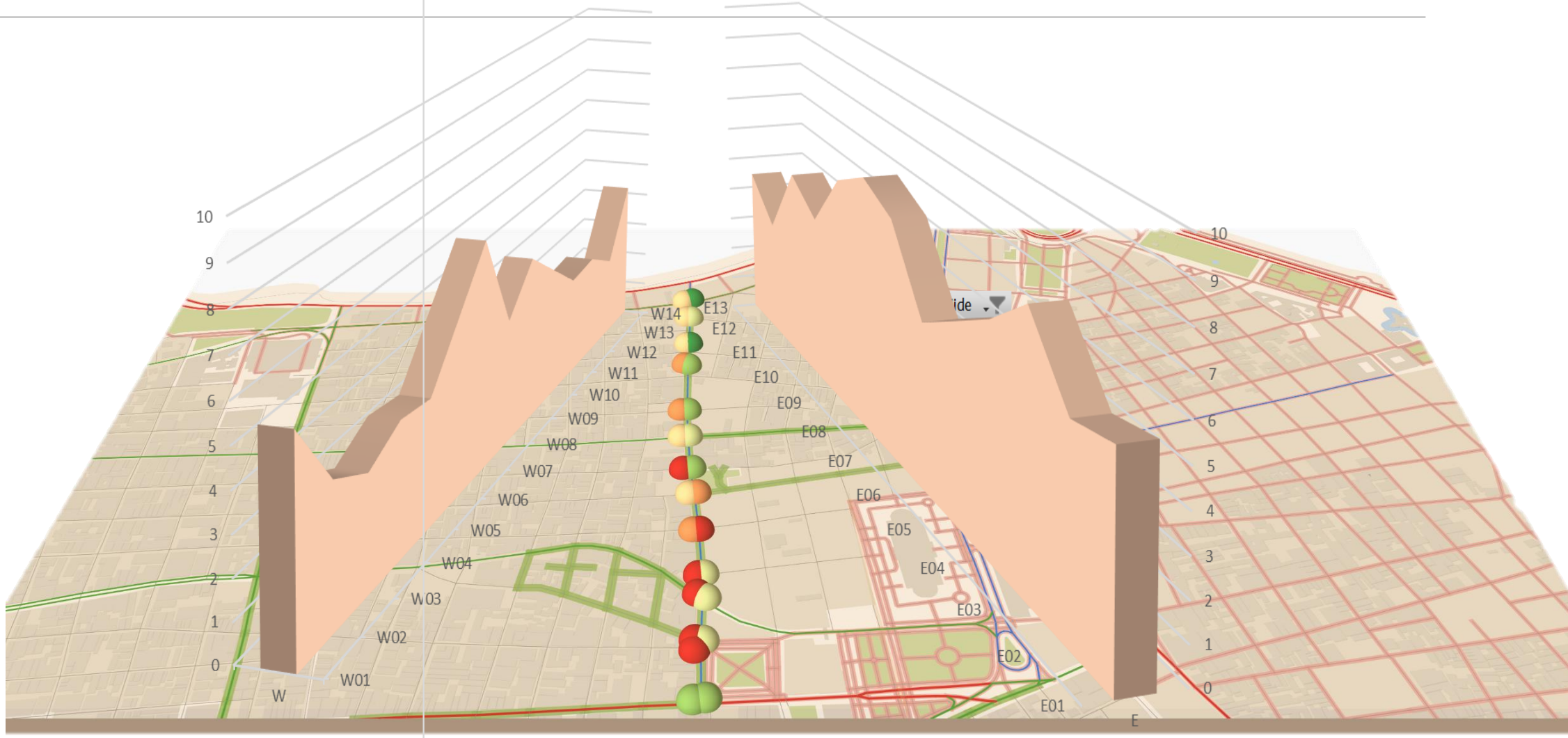


# Places to rest





# Interesting

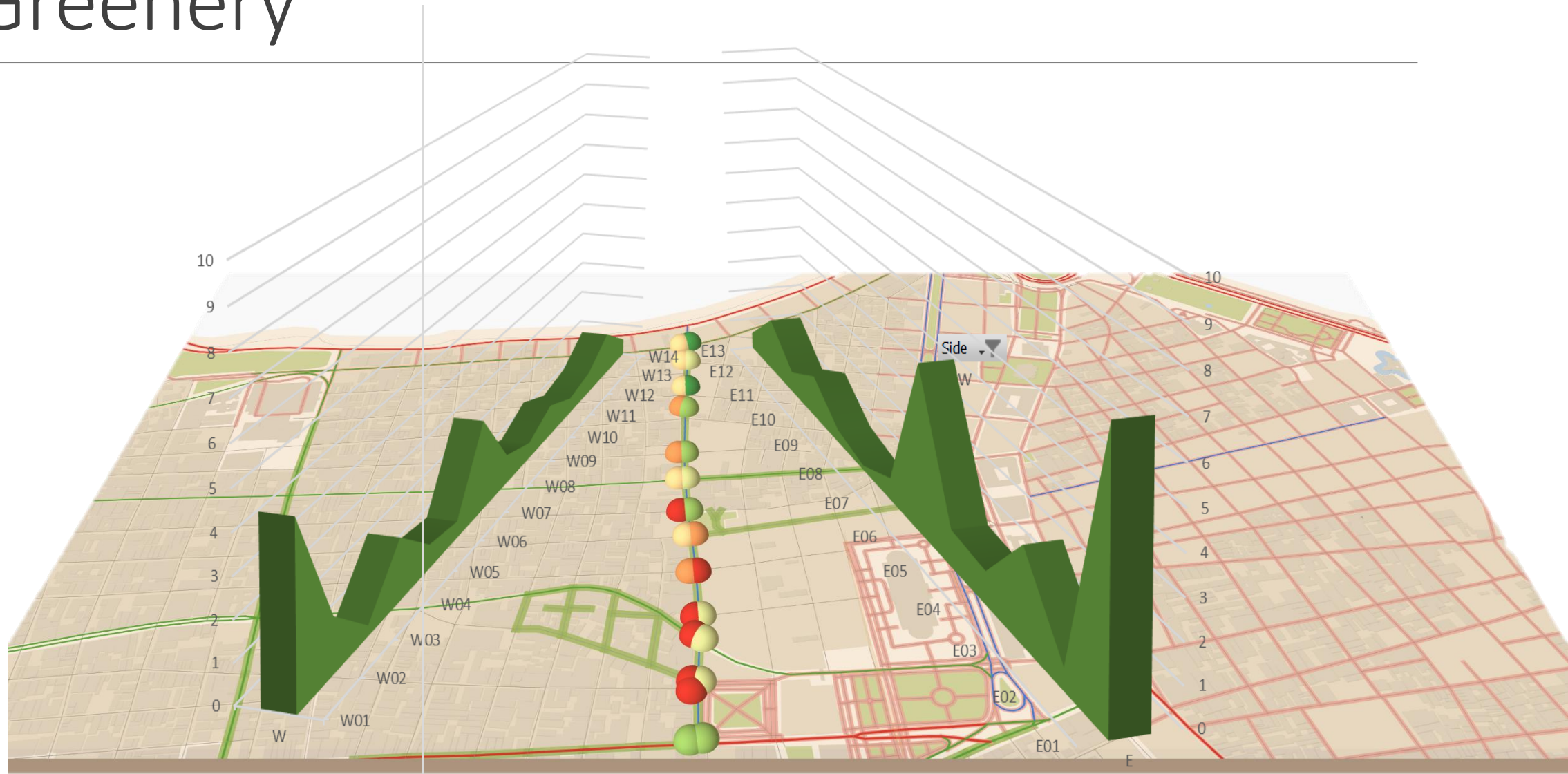




# Relaxed



# Greenery

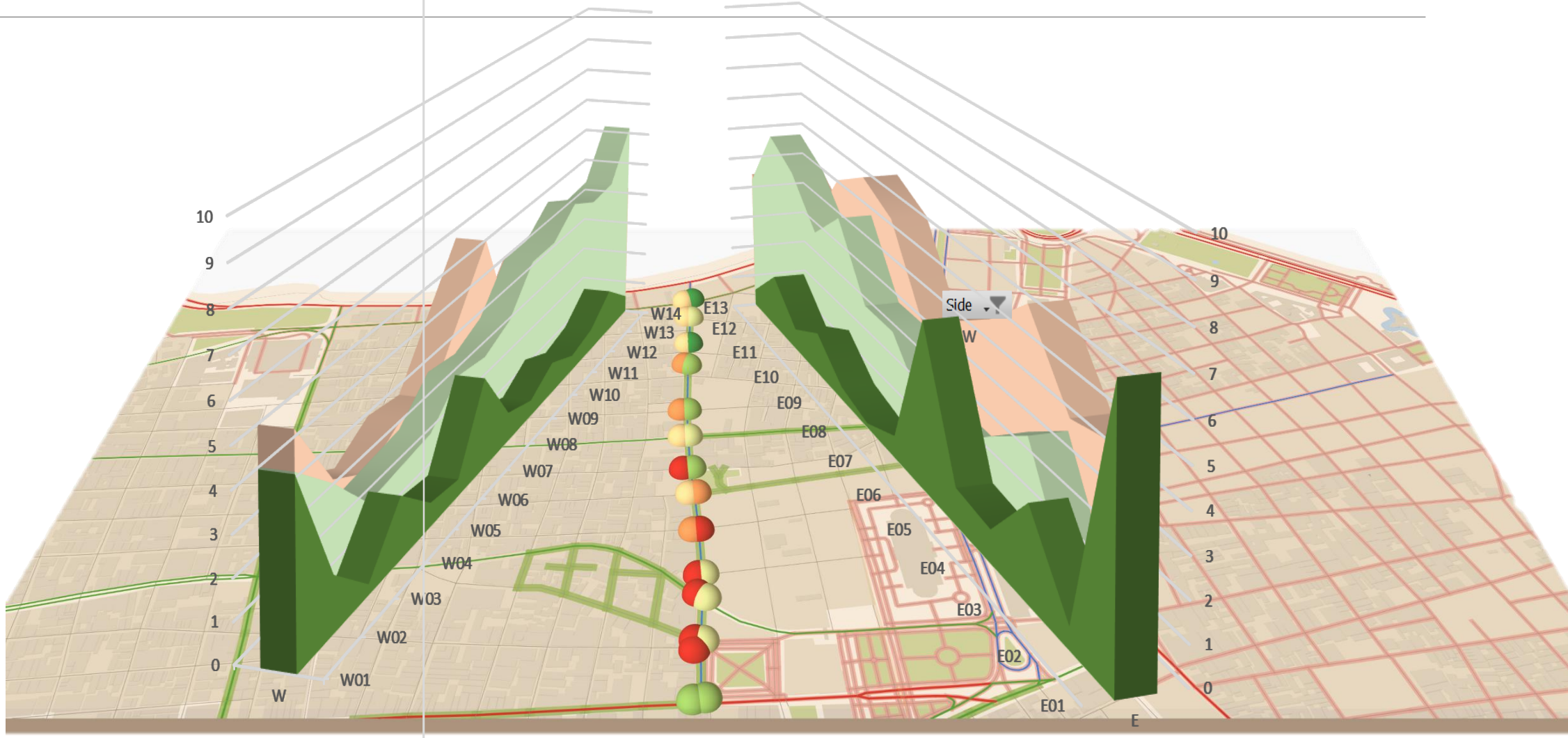








# Interesting



# Conclusions

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- Differences in mean scores between the east and west sides of the street, and between different sites along the street.
- Features non related with the built environment had an effect on scores (lower scores for side with sunshine and female participants)
- Poor quality (lowest scores) were assigned to green space resting places and noise levels. The only positive feature, on average, all related to the existence of colonnades providing shelter, wide pedestrian facilities with fewer obstacles than pavements and with acceptable quality surfaces

# Further research

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- Look more rigorously and systematically at the links between the perceived qualities and the objective qualities and people's experience of the street
- Extend the assessment at the city-wide scale with a sample of street typologies in different areas of the city



Thank you

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