

Rhythm as a Design Solution Space

Prof.dr. Caroline Nevejan & Pinar Sefkatli

Understanding Rhythm in Cities



Rhythm as urban territory

Rhythm as variation in a pattern

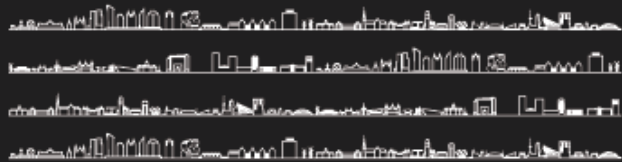
Rhythm as aesthetic experience

*Rhythm as force for connection
and engagement*

City Rhythm Research (2016-2018)

City Rhythm

Caroline Nevejan - Pinar Şefkattli - Scott Cunningham



The Hague - Zaanstad - Helmond - Rotterdam - Zoetermeer - Amsterdam



RESEARCH QUESTIONS IN 6 CITIES:

The Hague: How can conditions be improved in a housing block in which refugees and other residents live together?

Zoetermeer: How can the sense of safety in the Meerzicht neighborhood be increased?

Rotterdam: How can senior citizens feel safer?

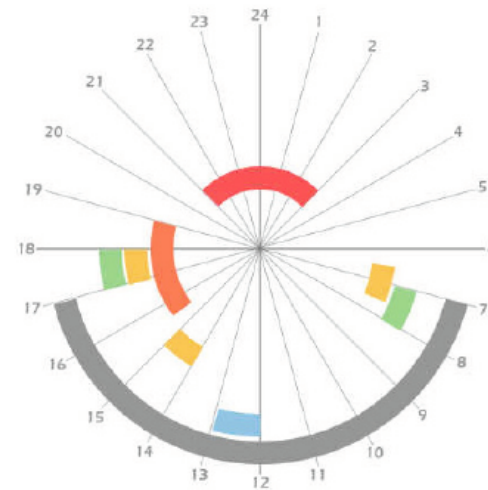
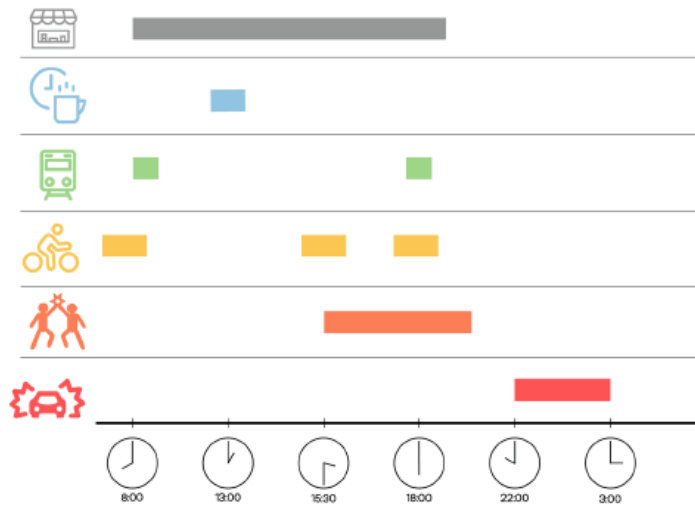
Zaanstad: How can youth (between 15 – 20) be more integrated into the neighborhood?

Helmond: How can the sense of safety be improved in the specific neighborhood of Beisterveld?

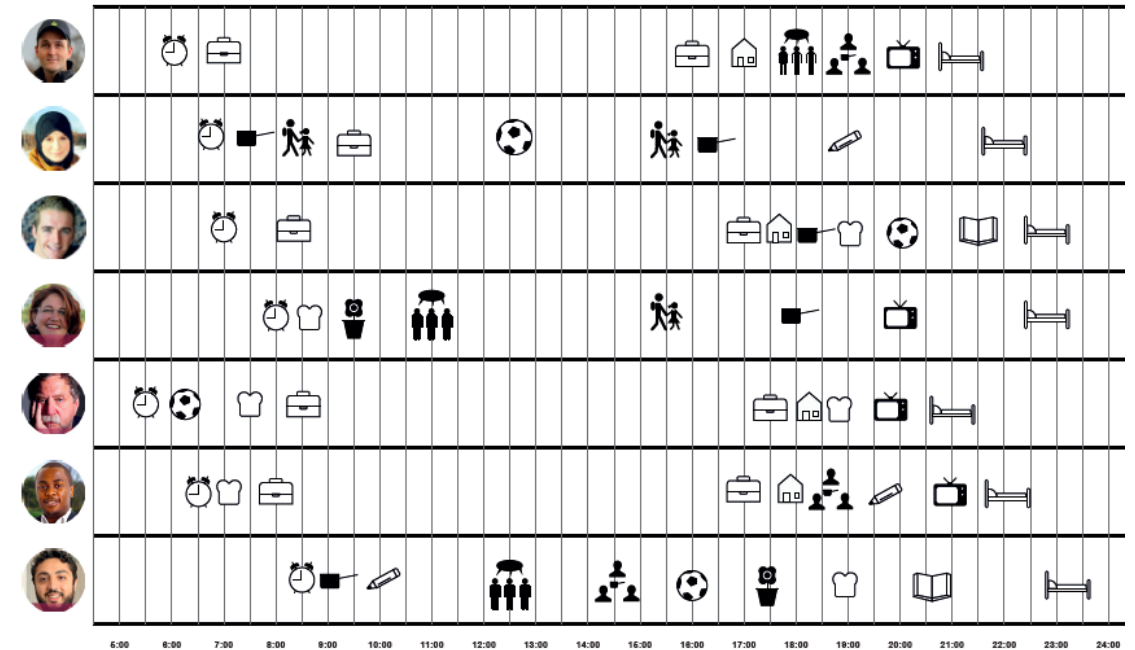
Amsterdam: How can single mothers participate more actively in education, work and so on?

Rhythm Perspective to Social Issues

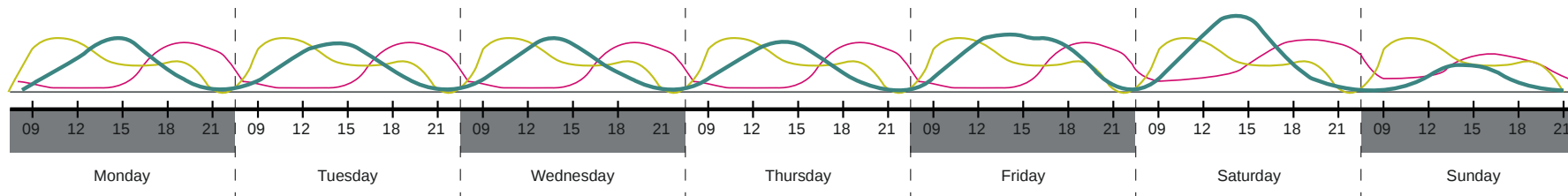
Zaanstad



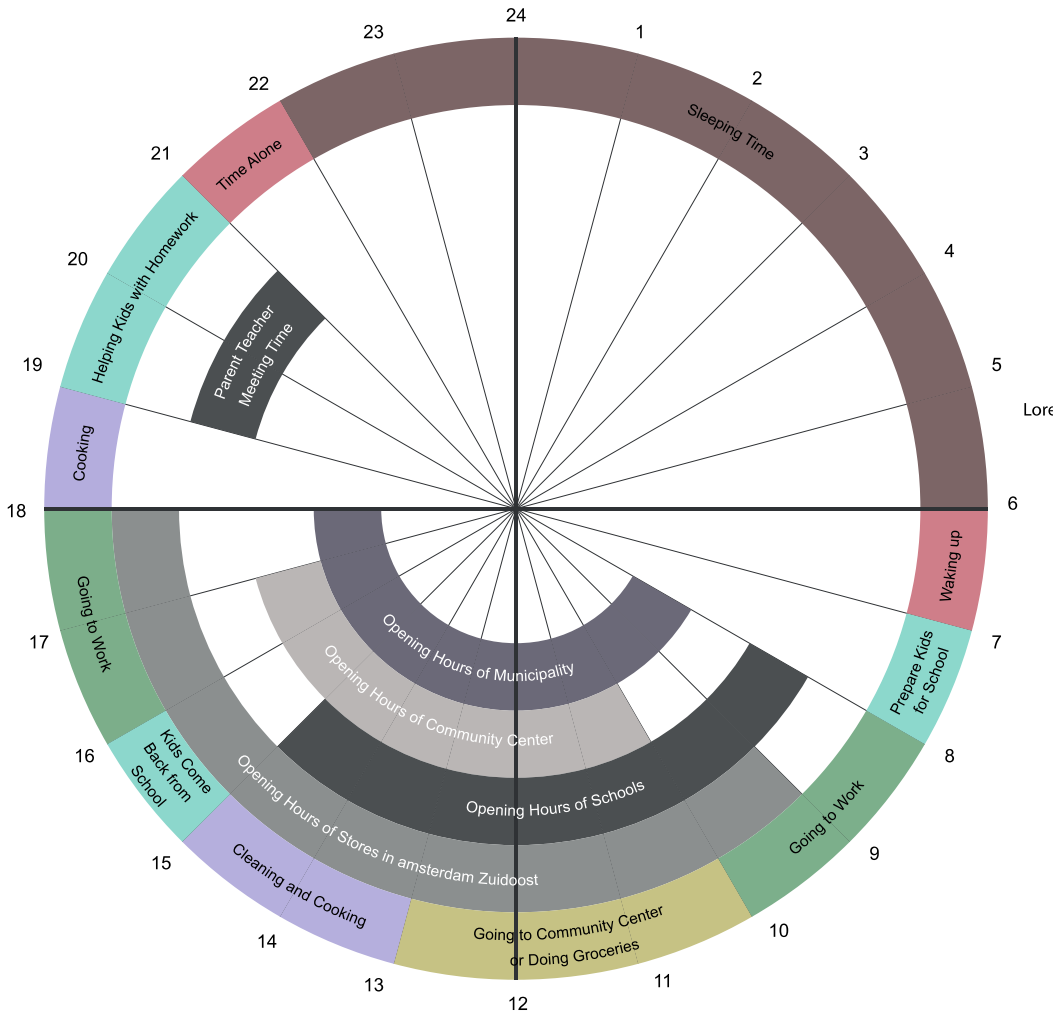
Den Haag



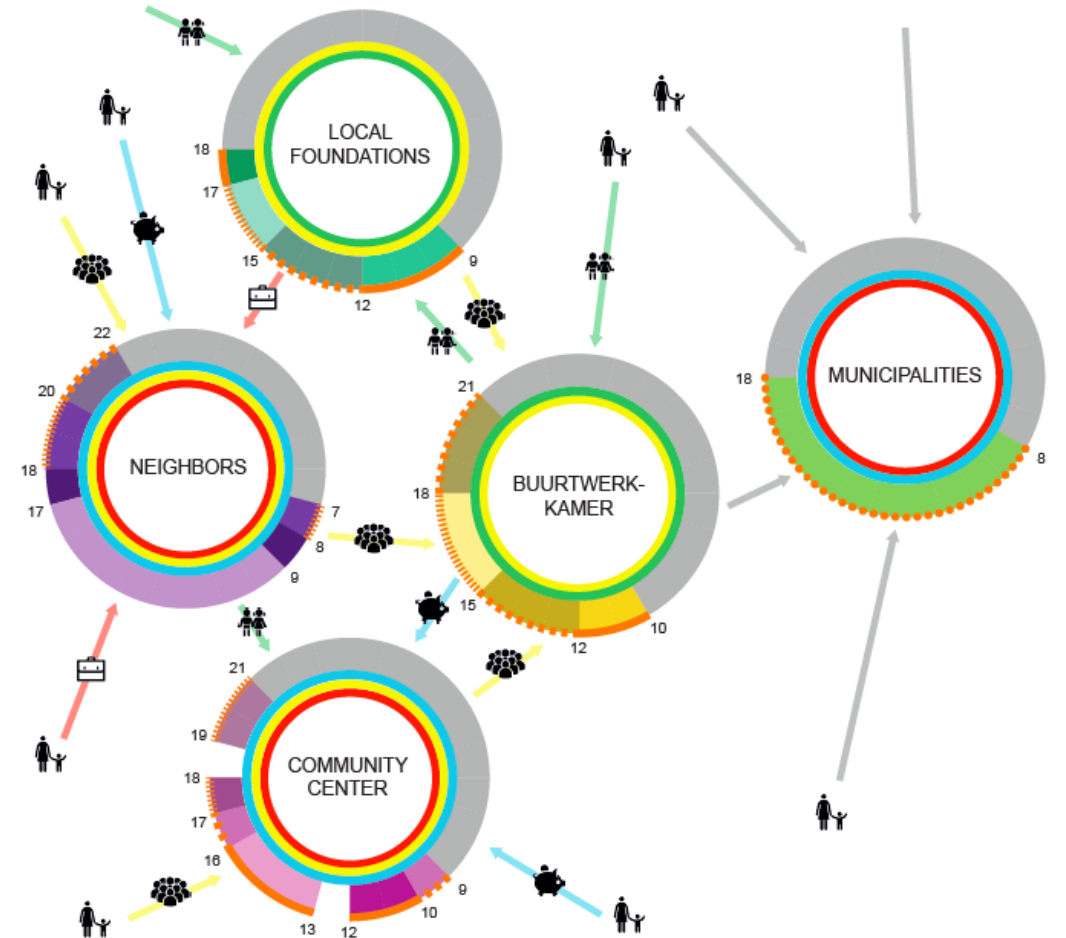
Rotterdam



Case Study Amsterdam Zuidooost: Single Mothers, Venserpolder

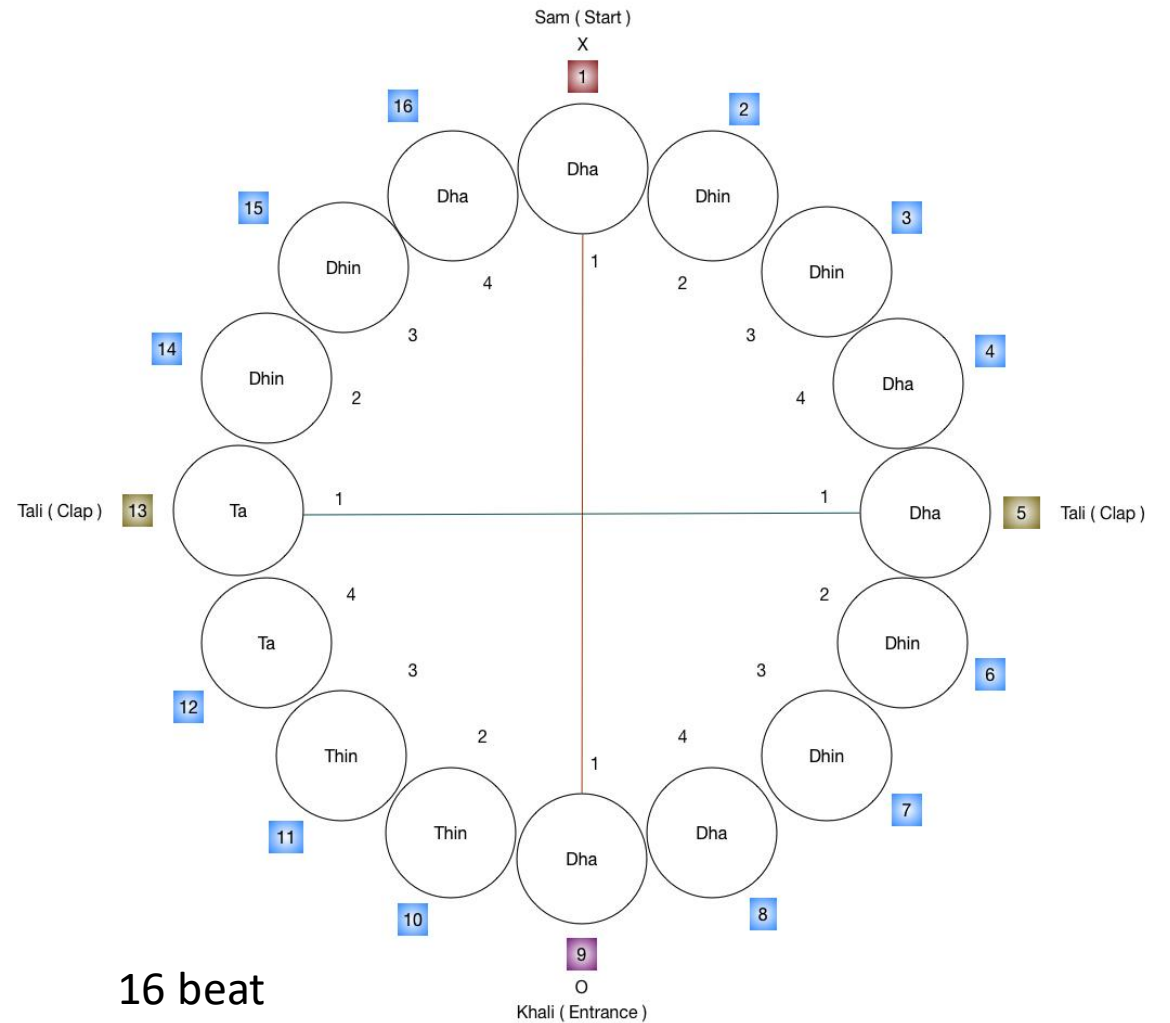


Daily Rhythm of Single Mothers



Network Rhythms of Single Mothers

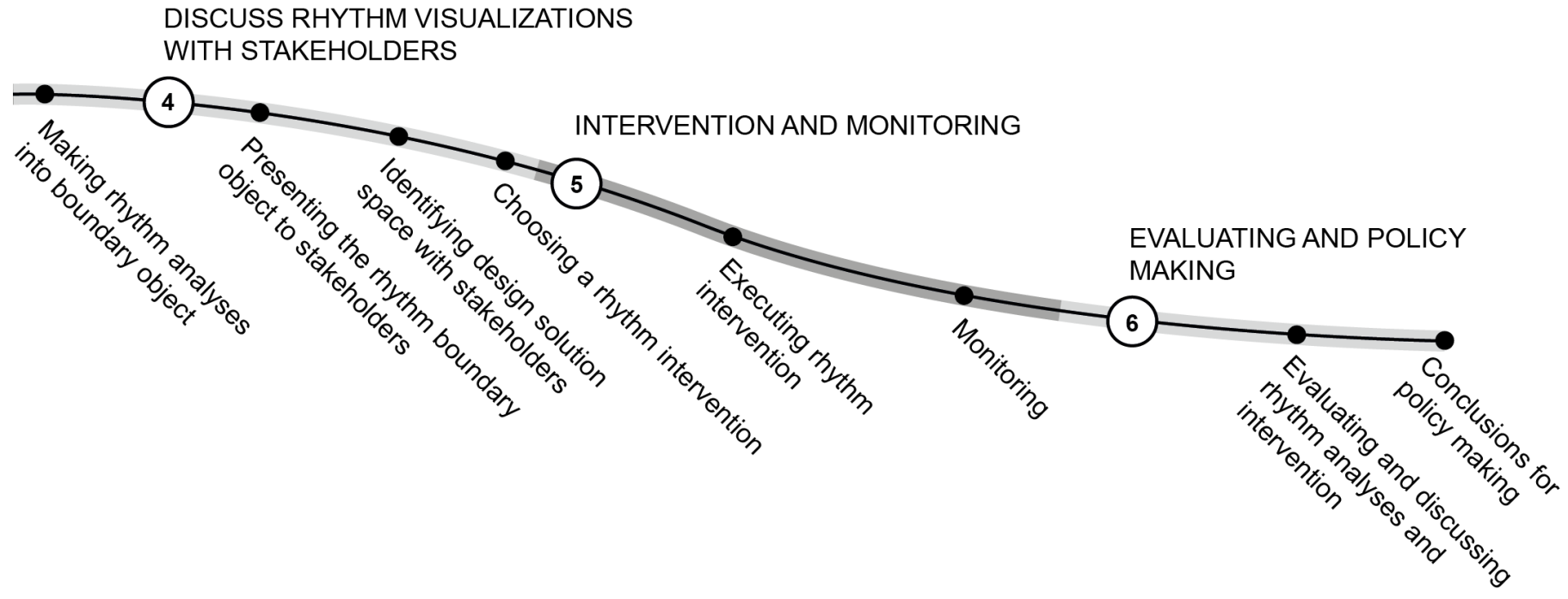
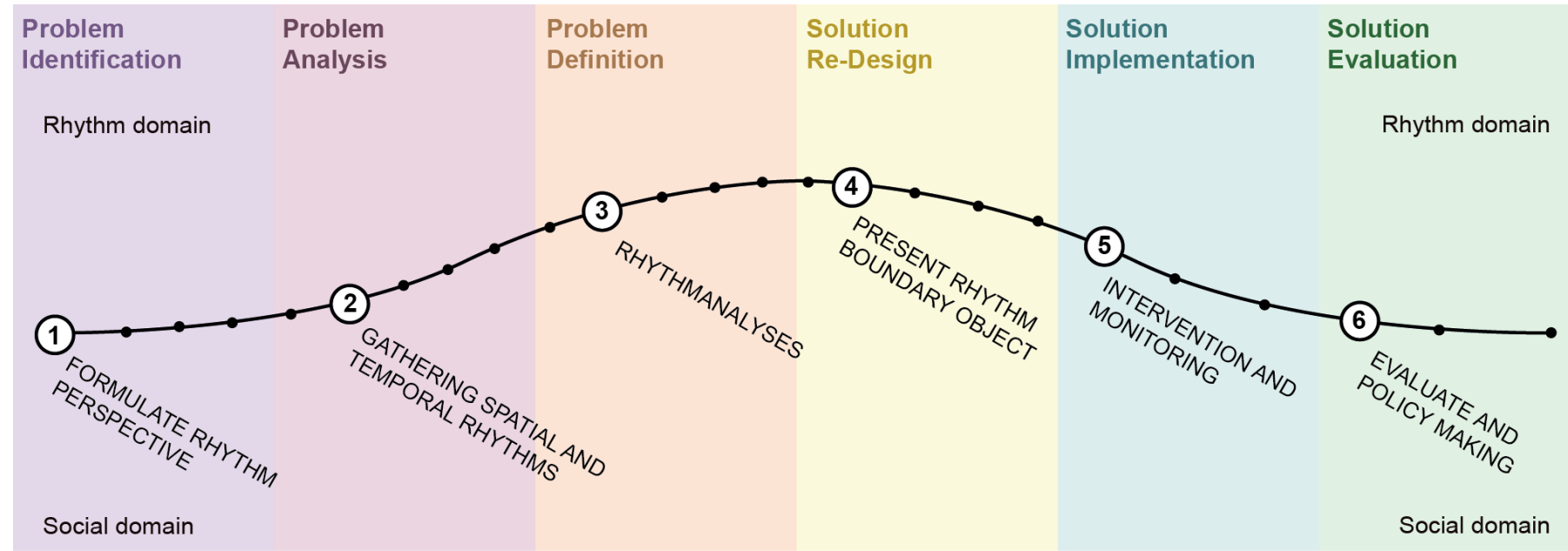
Artistic Research with Musicians on Rhythms



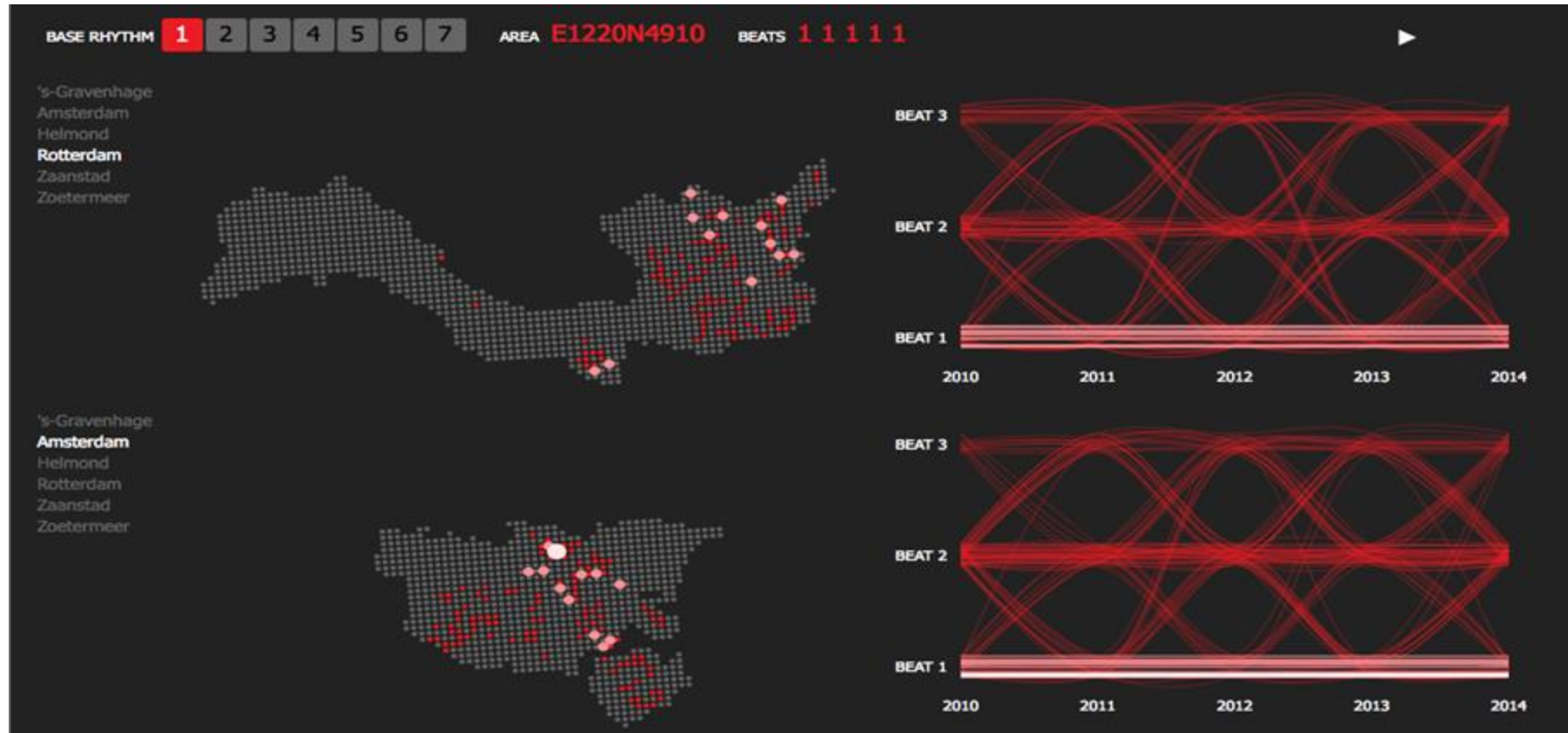
METHODOLOGY FOR URBAN RHYTHM ANALYSIS AS BOUNDARY OBJECTS

Caroline Nevejan
Pinar Sefkatli

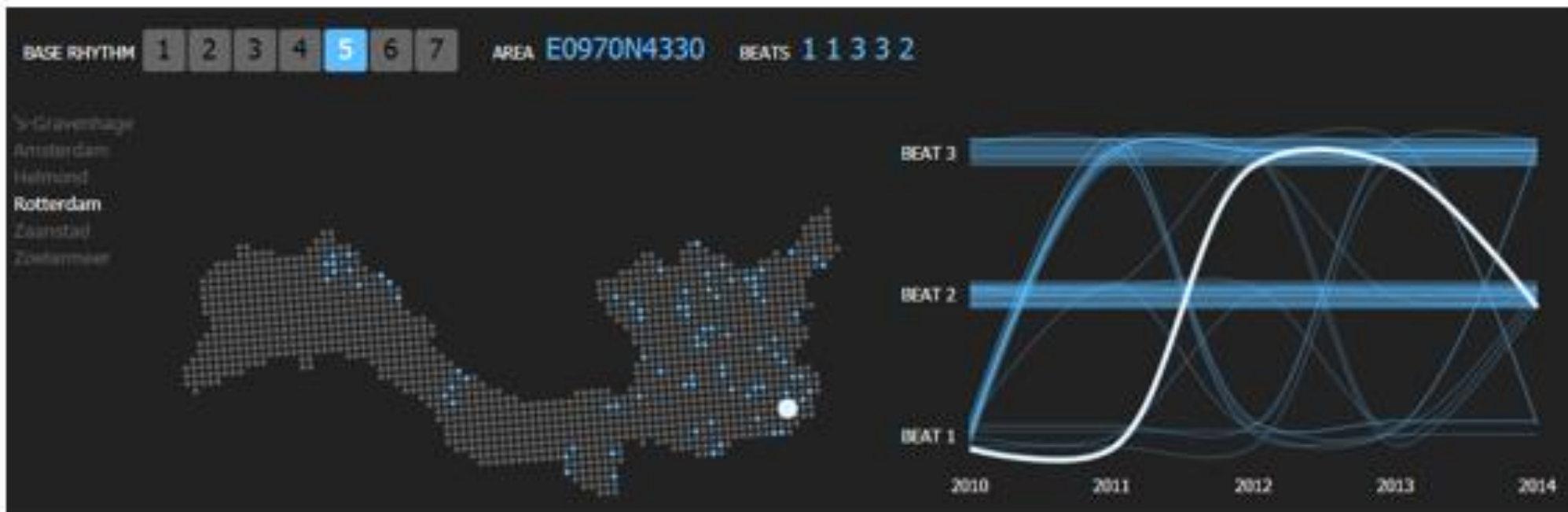
Article published in
“Rhythm and
Critique”, Edinburgh
University Press,
2020



City Rhythm Data Model



<https://www.bloomingdata.com/cr/>



DESIGNING RHYTHMS FOR SOCIAL RESILIENCE

(2017–2024)

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TU Delft
Prof. Alessandro Bozzon
Dr. Achilleas Psyllidis
Dr. Sergei Zhilin (Post Doc)

Habidatum
Katya Letunovsky
Alexei Novikov
Nikita Pestrov

Territorial Rhythms

Trash in Outdoor
spaces



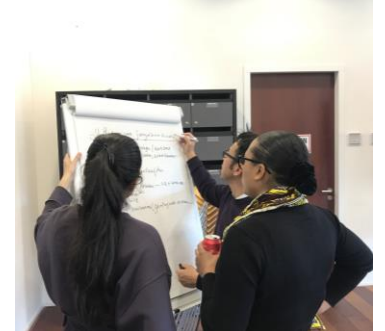
Institutional Rhythms

Youth Care Services
in Organisations



Rhythms in Social Relations

Togetherness During
the Pandemic



✗ Gemeente
✗ Amsterdam
✗ Zuidoost

✗ DataLab
✗ Amsterdam
✗



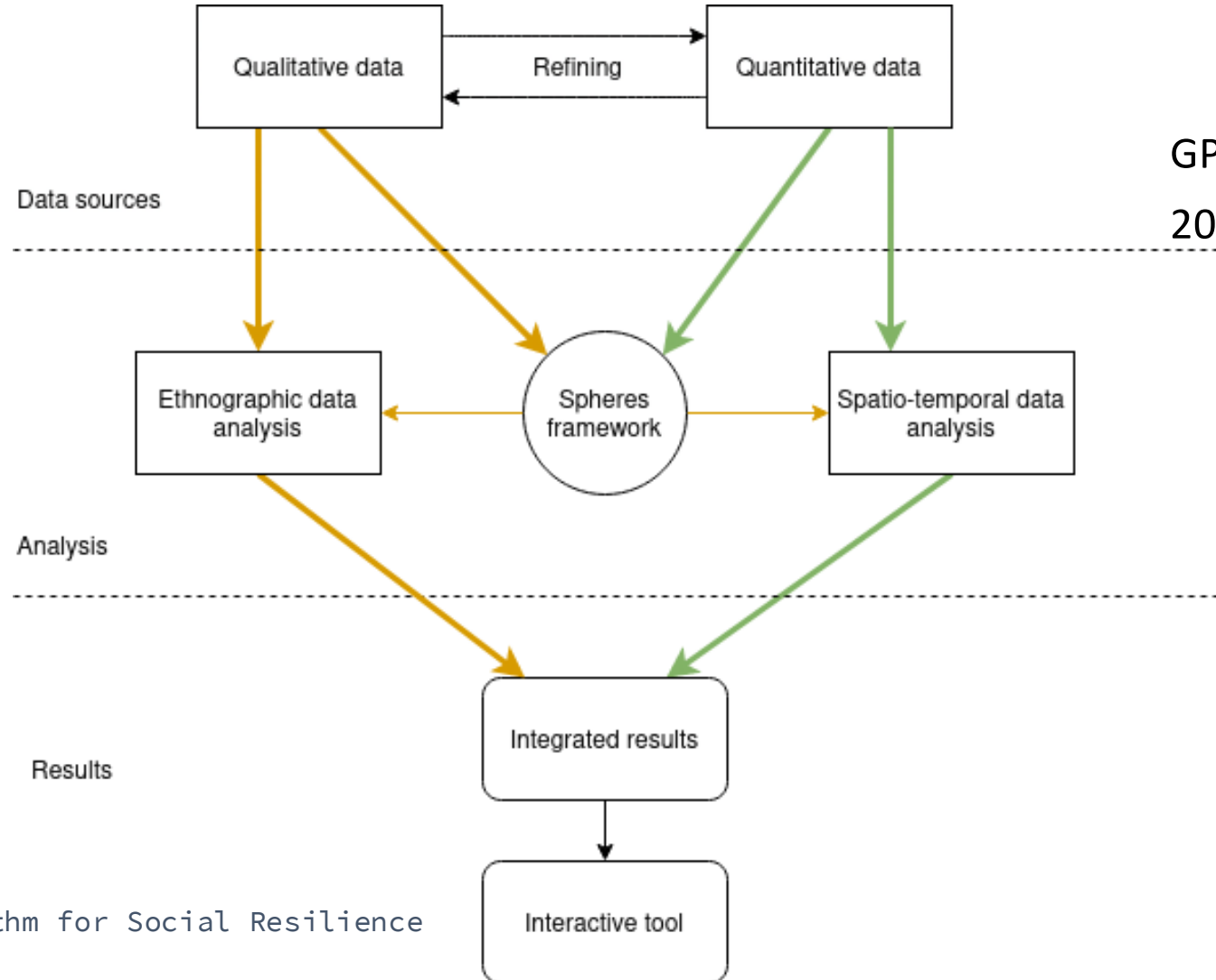
UNIVERSITEIT VAN AMSTERDAM



Linking ethnographic and big data research

Ethnography and expert
knowledge of Amsterdam

GPS data June 2019 - Dec
2023



DATA GATHERING & ANALYSIS

Spatio-temporal
analysis

Participatory
observation

Individual and group
interviews

Analysis of urban
forms and functions

Visual documentation
and analysis

Trash Case



Youth Unemployment Case



Zuidoost Werkt

Zuidoost Werkt is an initiative from the Gemeente Amsterdam Zuidoost, as a...



Jongerenpunt

Jongerenpunt is the department of the municipality where they deal with...



Swazoom

Swazoom is one of the most well-known organisations in Zuidoost for the...



ProFor

ProFor is an organisation where mainly Spanish and Papiamento speaking...



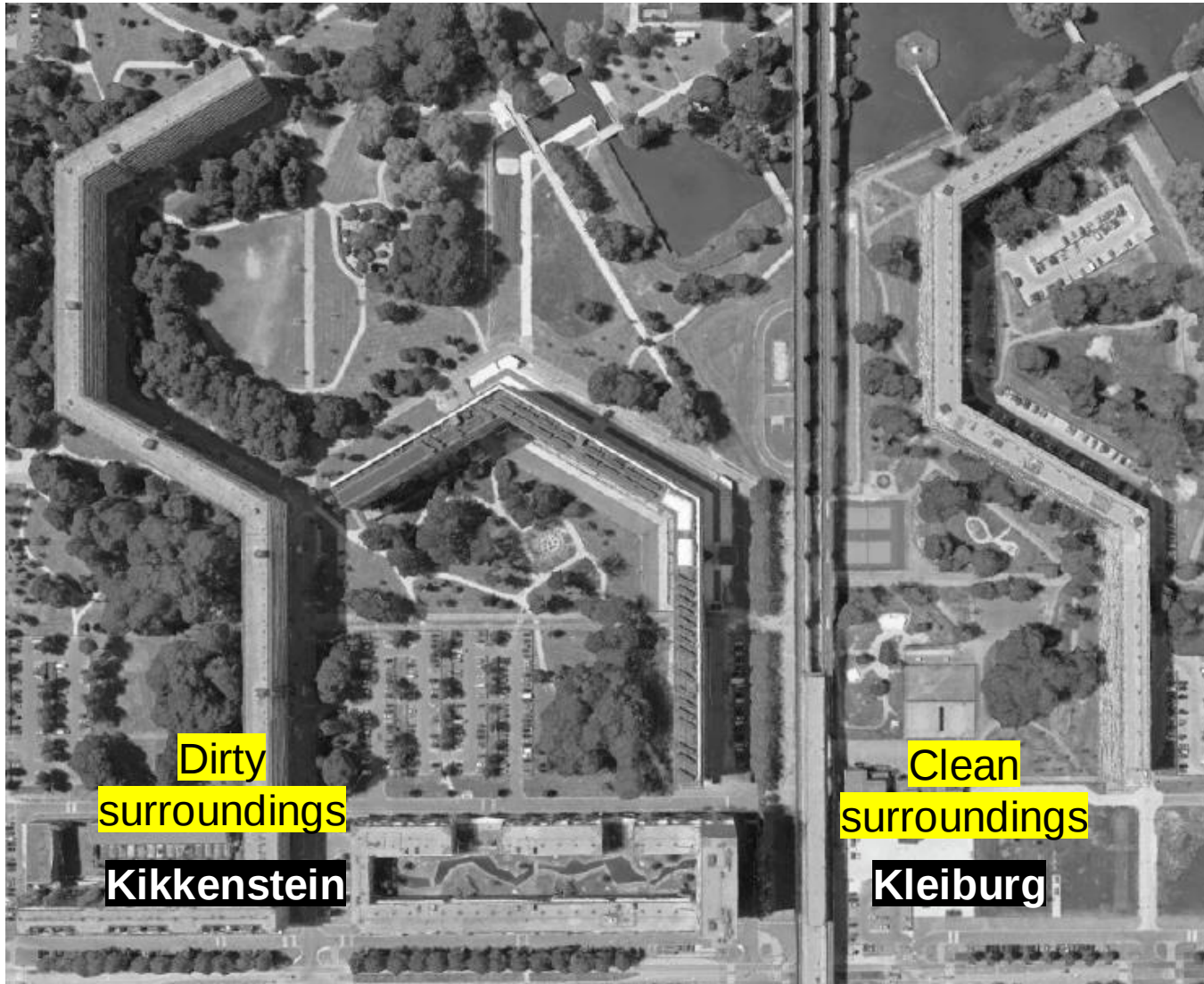
Streetcorner Werk

Streetcorner is a well-know organisation in Zuidoost that help the youth.

Covid-19 Pandemic



Case Study 1: Trash in Outdoor Spaces



Territorial Rhythms

Urban Territories: Deleuze and Guattari

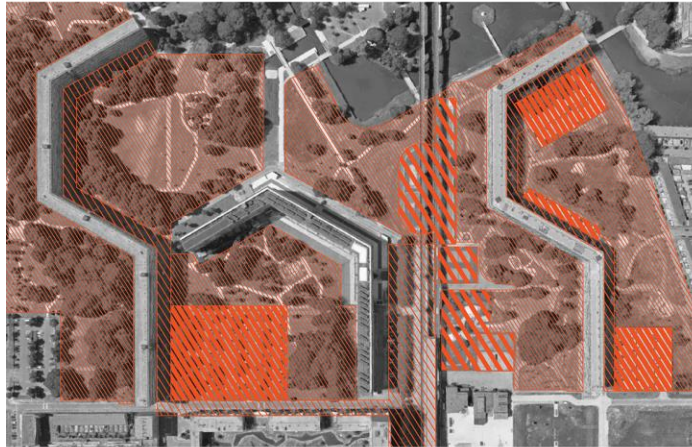
Territory as ‘holding together’ of heterogeneous elements”. Rhythms like cycles, sounds, colour and spatial attributions “adopt a new practical pace” in a territory

Urban Patterns: C. Alexander

Patterns are the “ultimate constituents” of buildings and towns. Every place is characterised by an interplay between “patterns of events” and “geometric patterns in the space”.

Identifying and Mapping the Rhythms

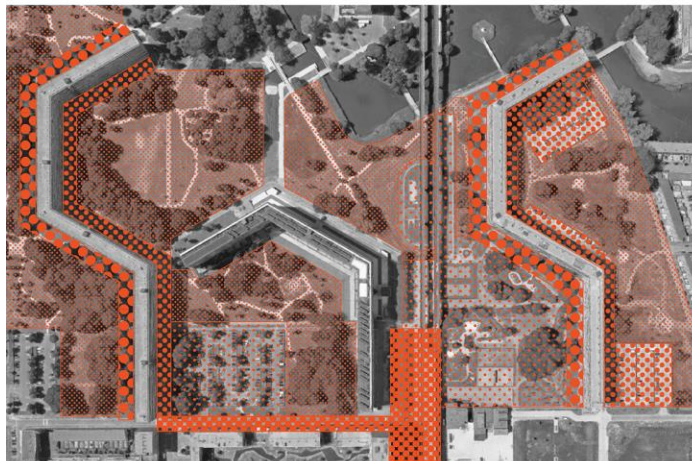
Spatial Features



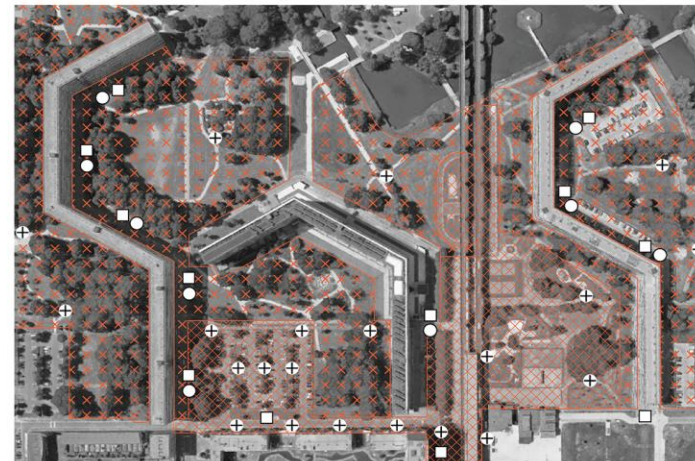
Cleaning Types



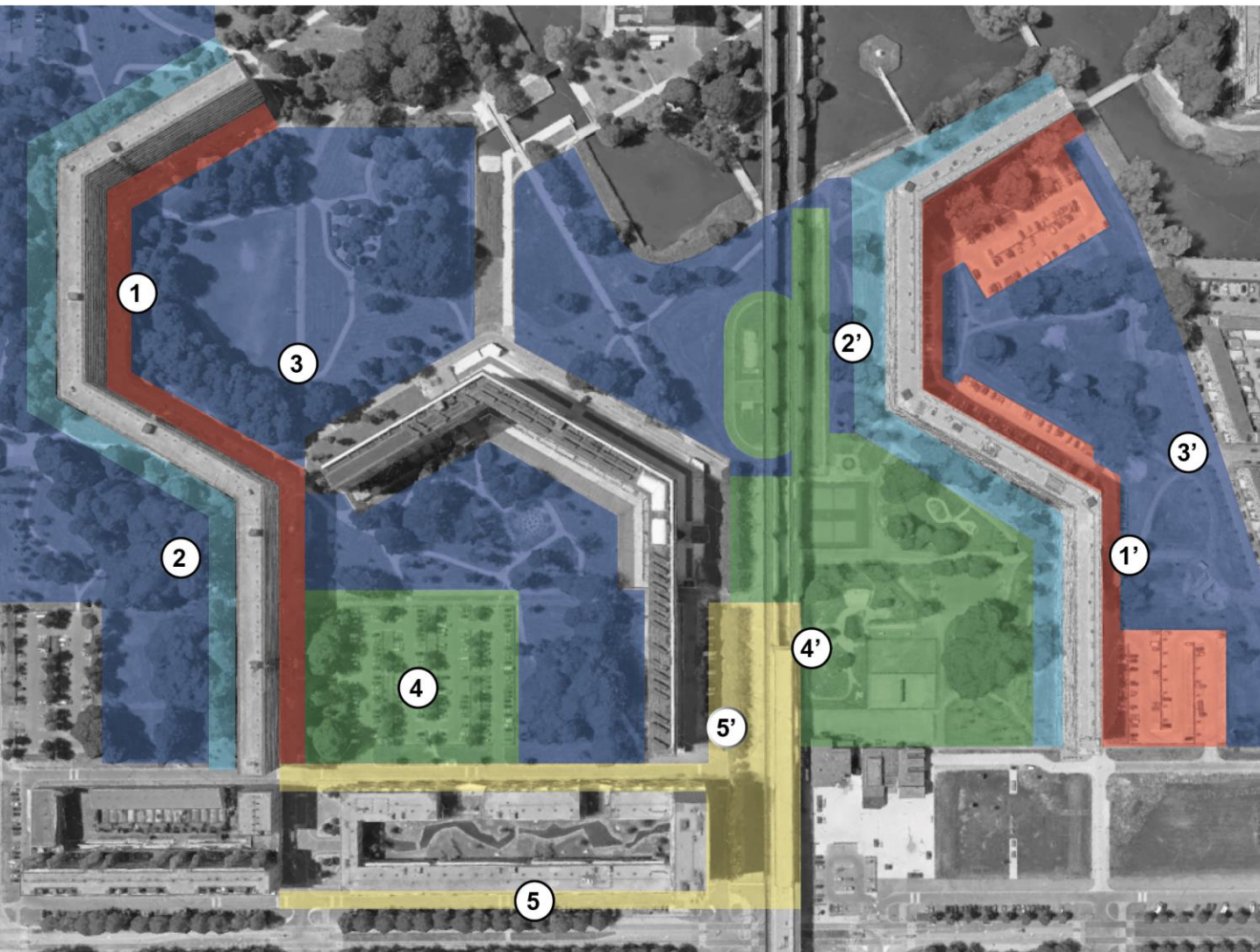
Social Use



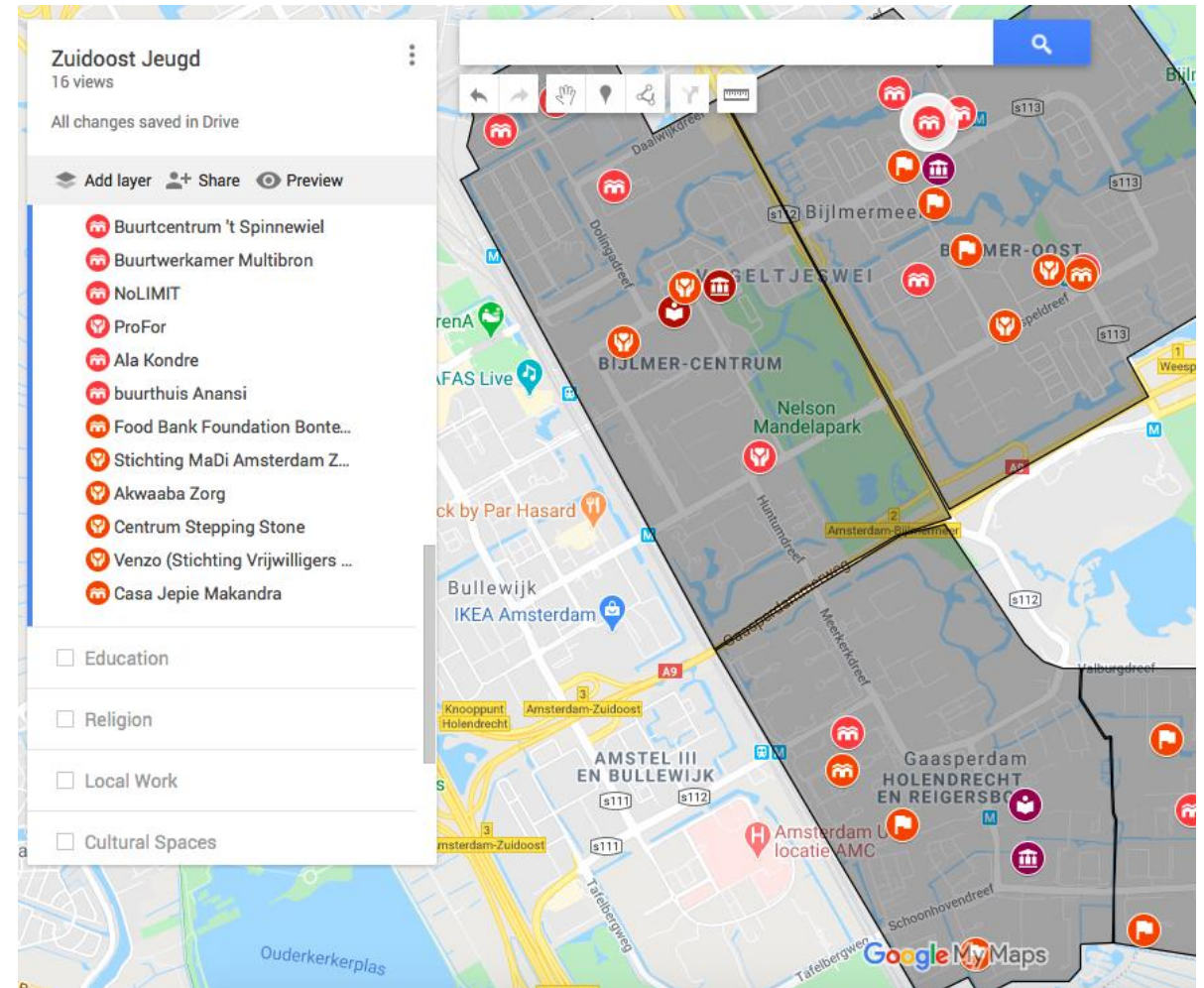
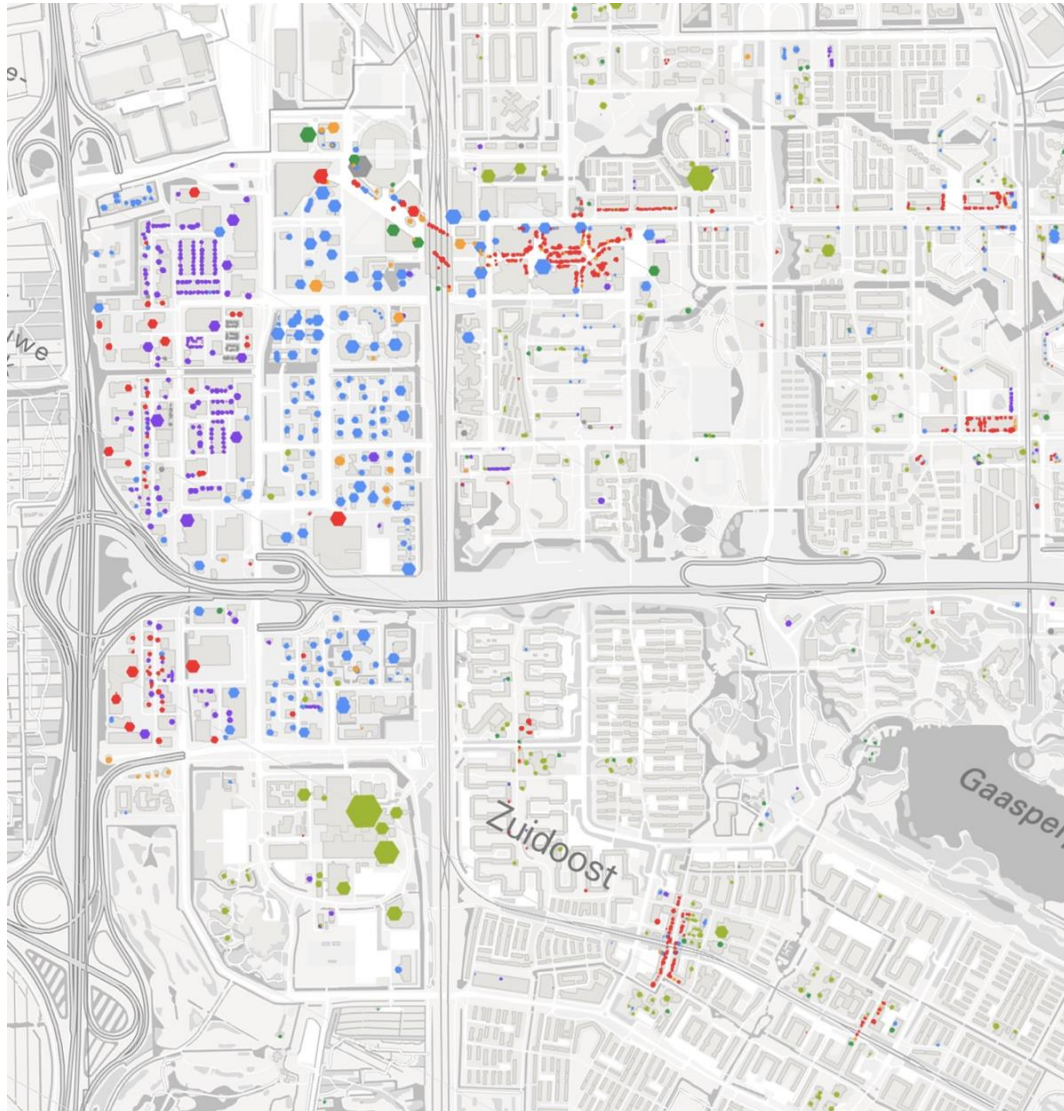
Cleaning Frequency and Trash Collection Types



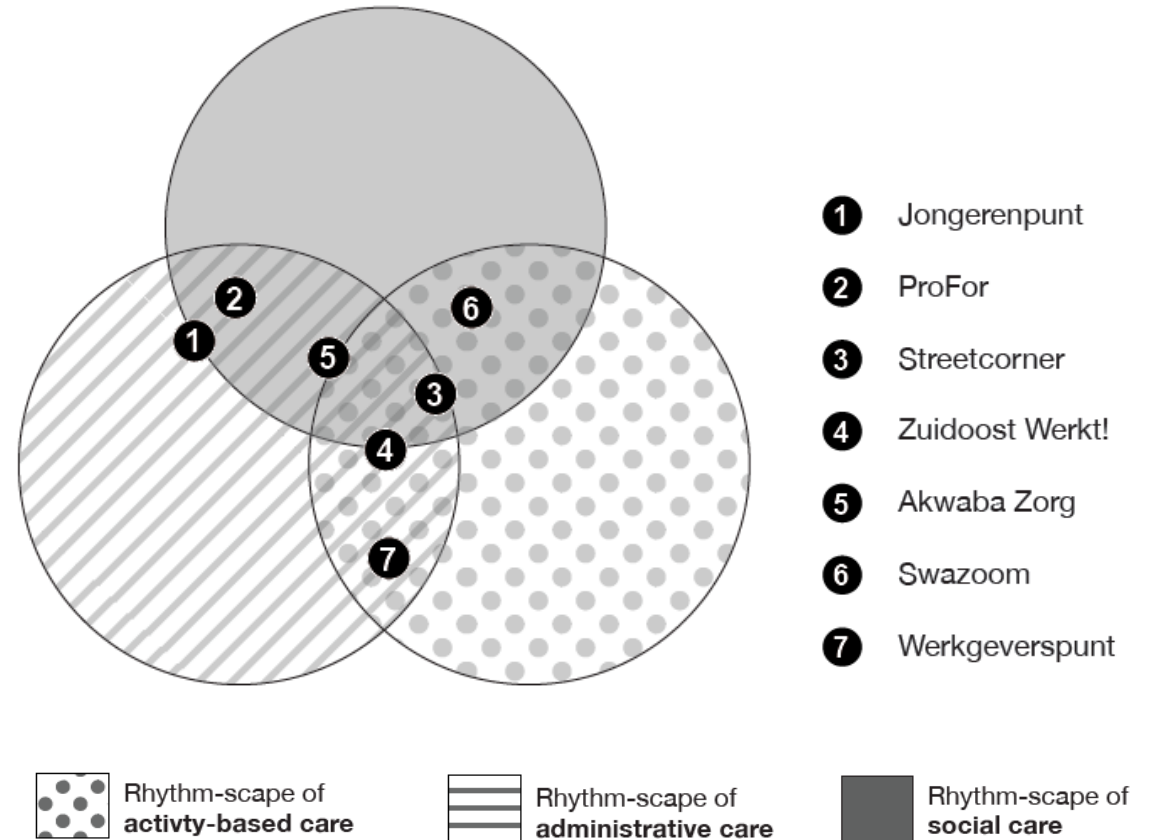
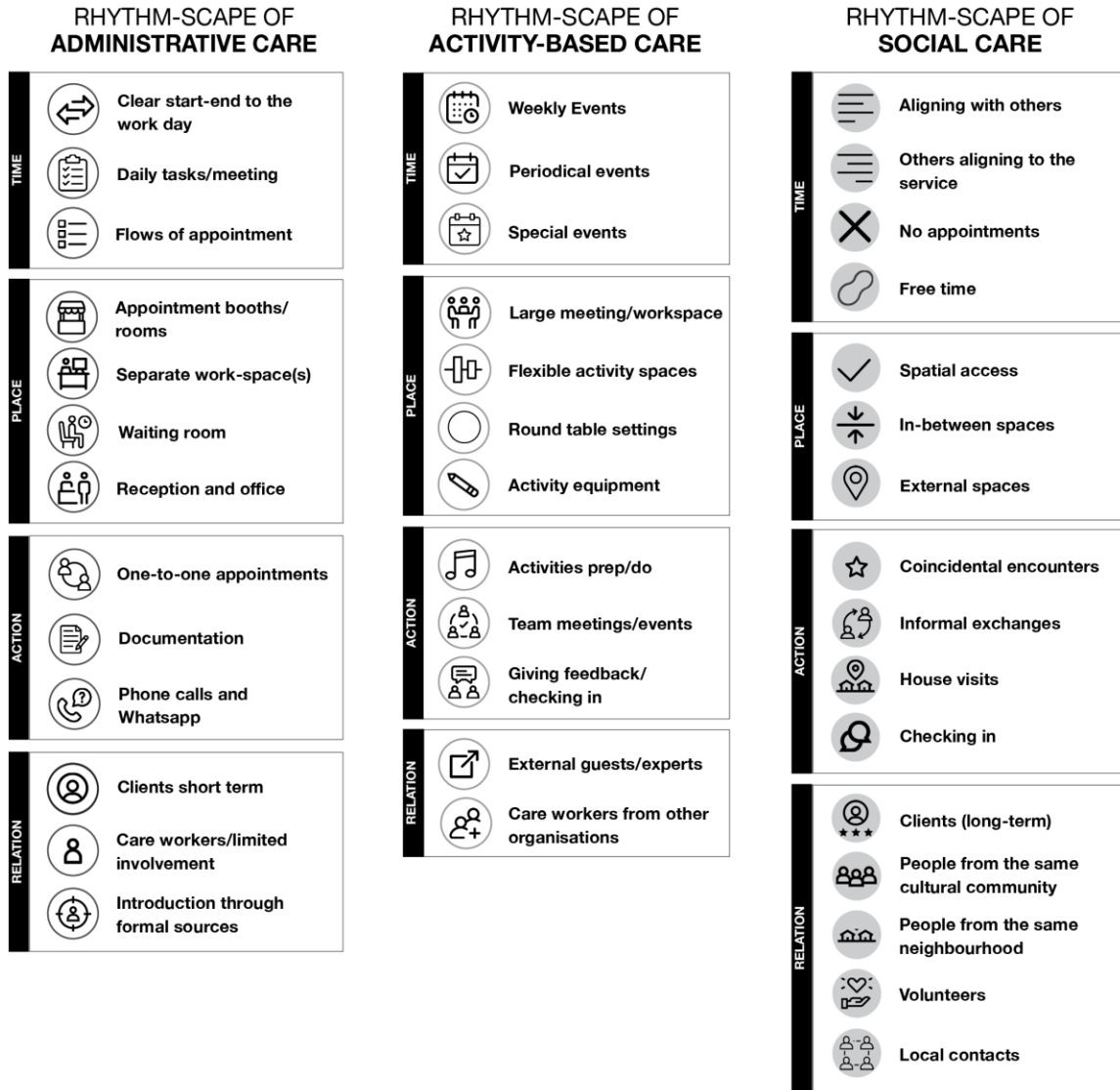
Rhythm zones: conceptualization



Case Study 2: Youth Care Services

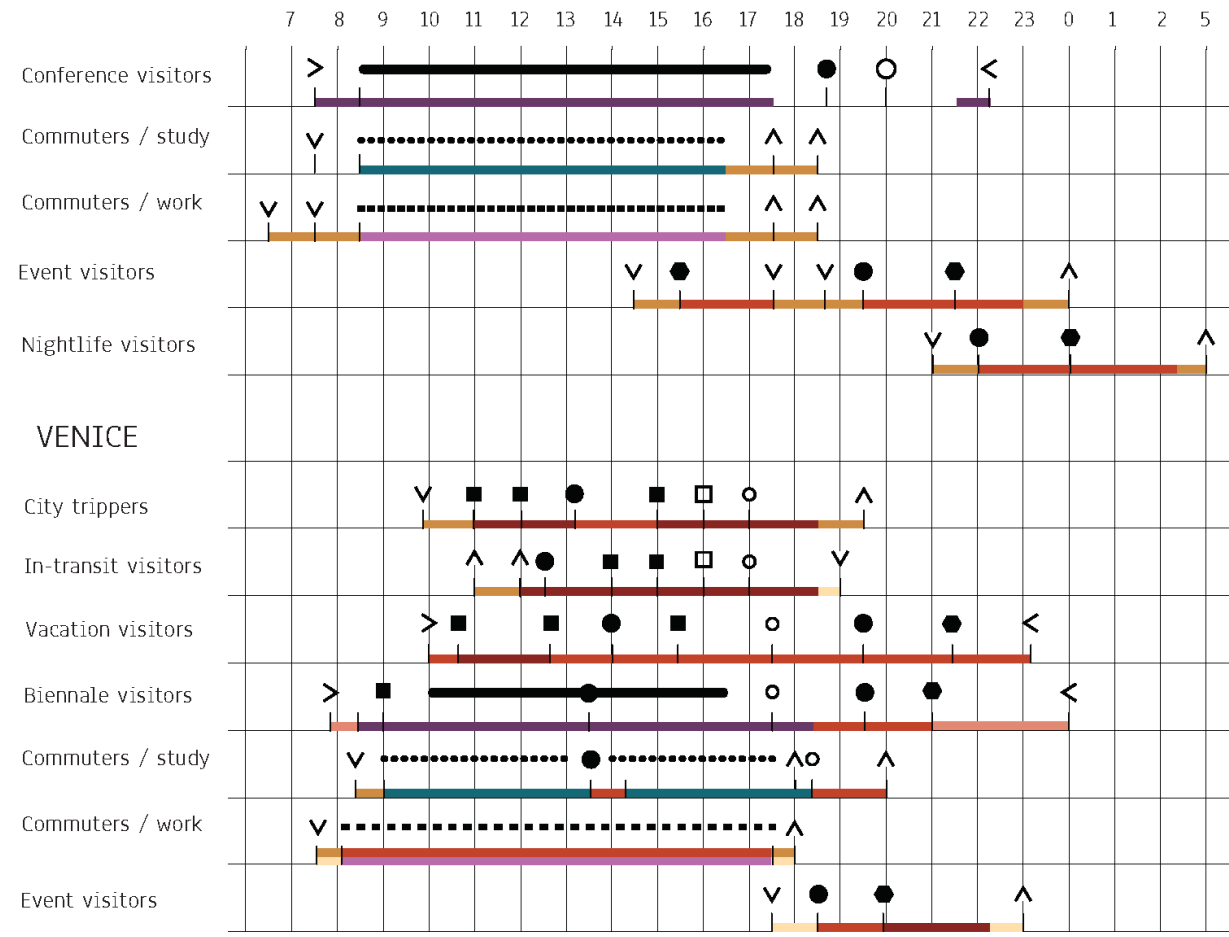
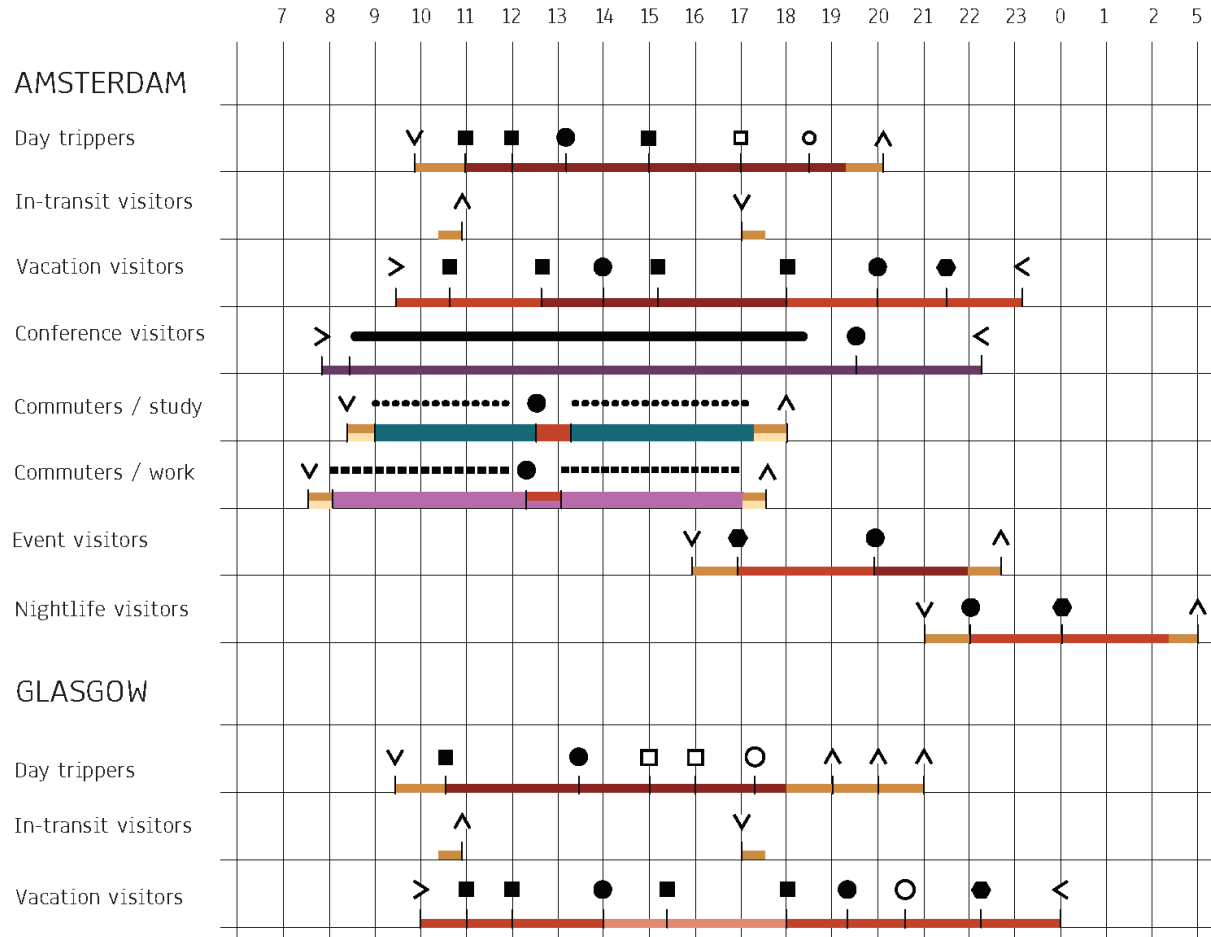


Rhythm-scapes: conceptualisation



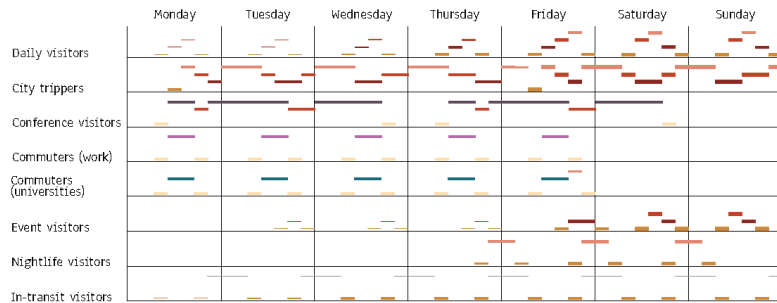
Tides of Tourism

(Venice Exploratorium Values for Survival)



Weekly and Yearly Rhythms

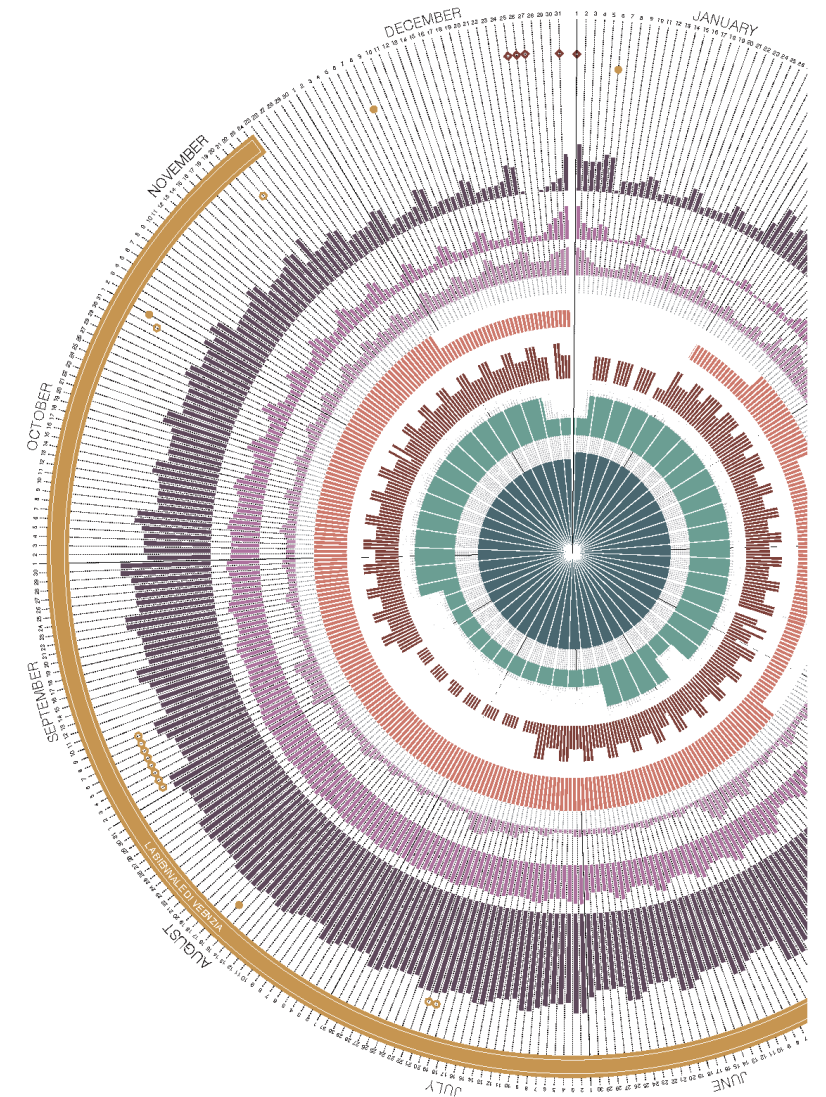
AMSTERDAM



GLASGOW

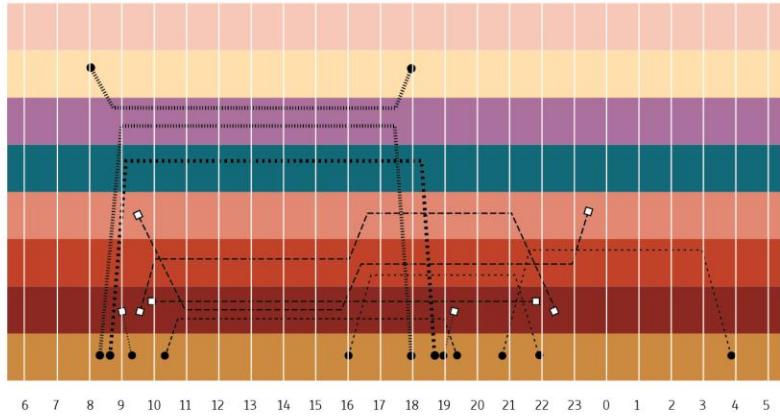


VENICE

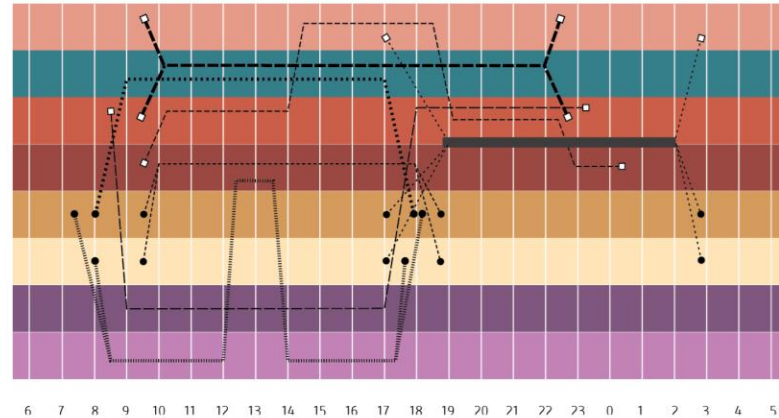


Weekly and Yearly Rhythms

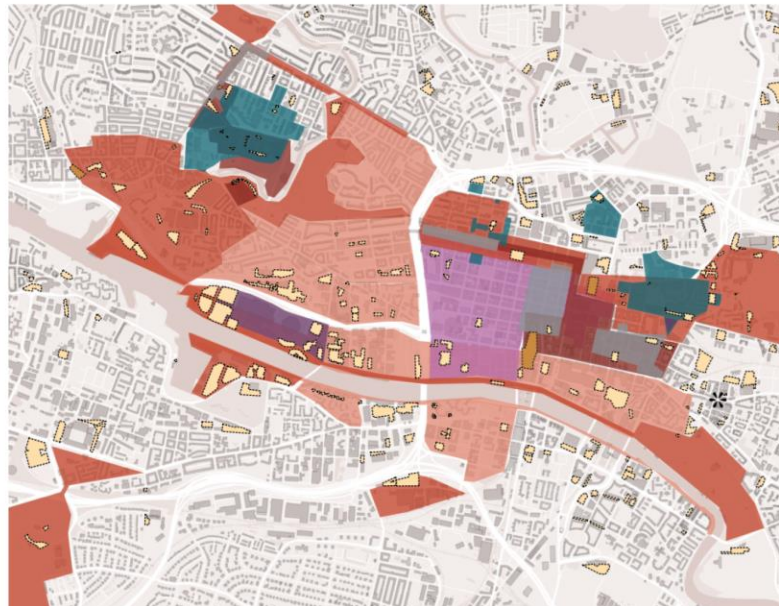
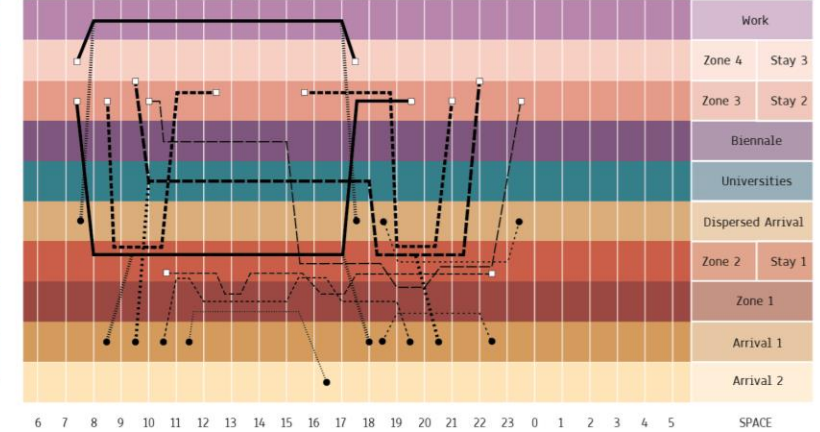
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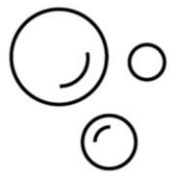
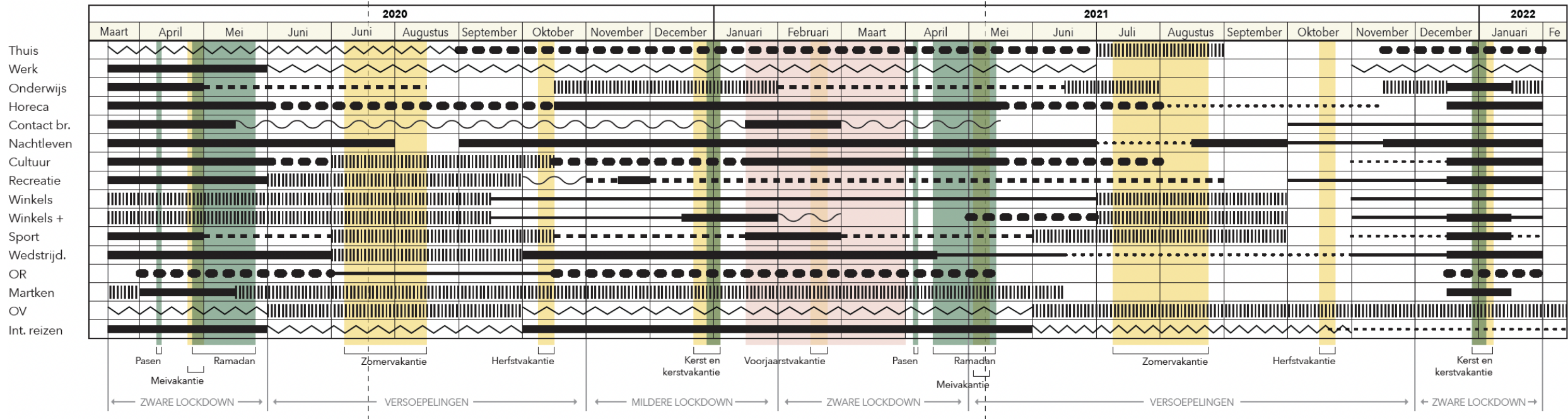
GLASGOW



VENICE



Case Study 3: Togetherness During the Pandemic



**Rhythm Spheres
of Bubbles**

Rhythms of intimacy, which can be observed in close relationships and at private times and spaces



**Rhythm Spheres
of Foams**

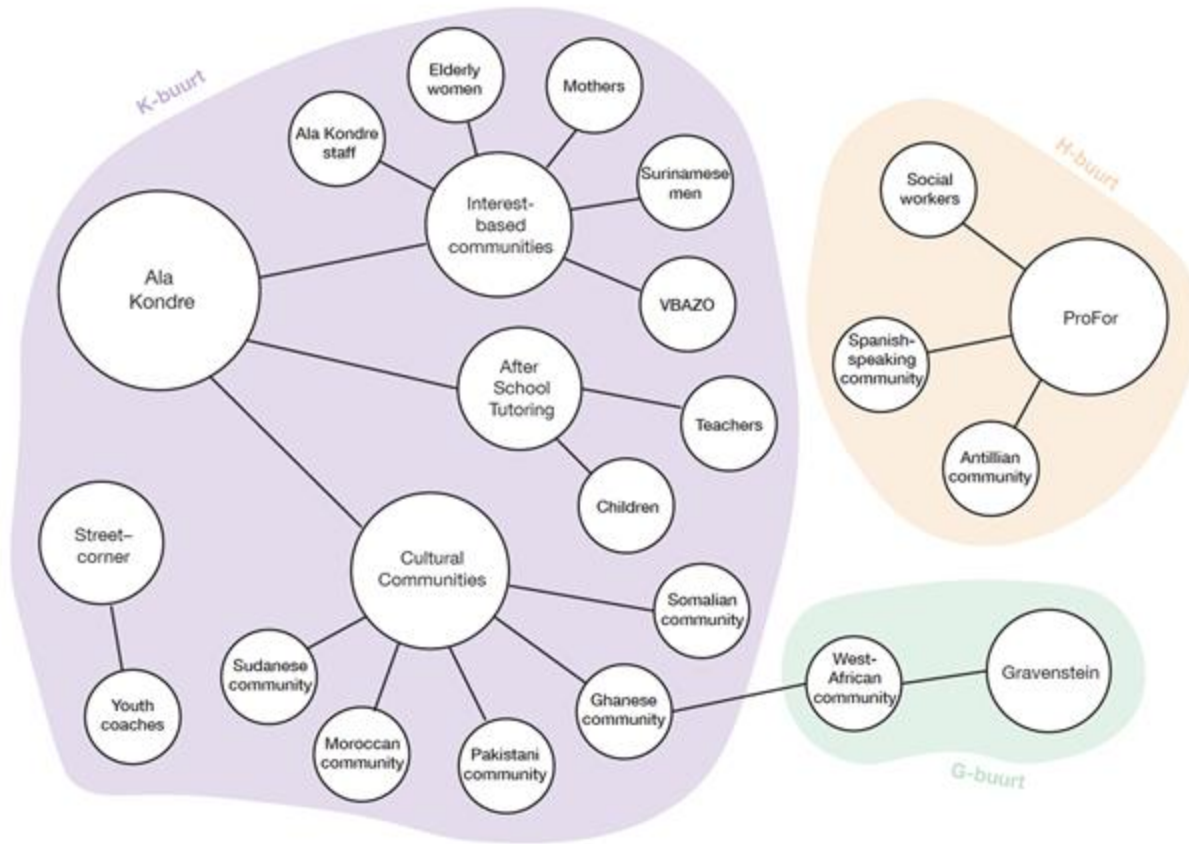
Network and community-based rhythms, which emerge from synchronised schedules, timelines and places



**Rhythm Spheres
of Globes**

Rhythms of public life, which appear in indoor and outdoor public spaces through shared rhythms and flows

Togetherness During the Pandemic



	Spatial Proximity					
	Home/ Online	Street/ Block	Neigh- bourhood	City Borough	City	Region/ Country
Temporal Frequency	Daily					
	Few times a week					
	Weekly					
	Monthly					
	Seasonal					
	Yearly					
Synchronised Engagement		0 – 1 hours	1 – 4 hours	4 – 8 hours	8 + hours	Undefined

Household
activities

Activities with
**Family &
Friends**

Work
activities

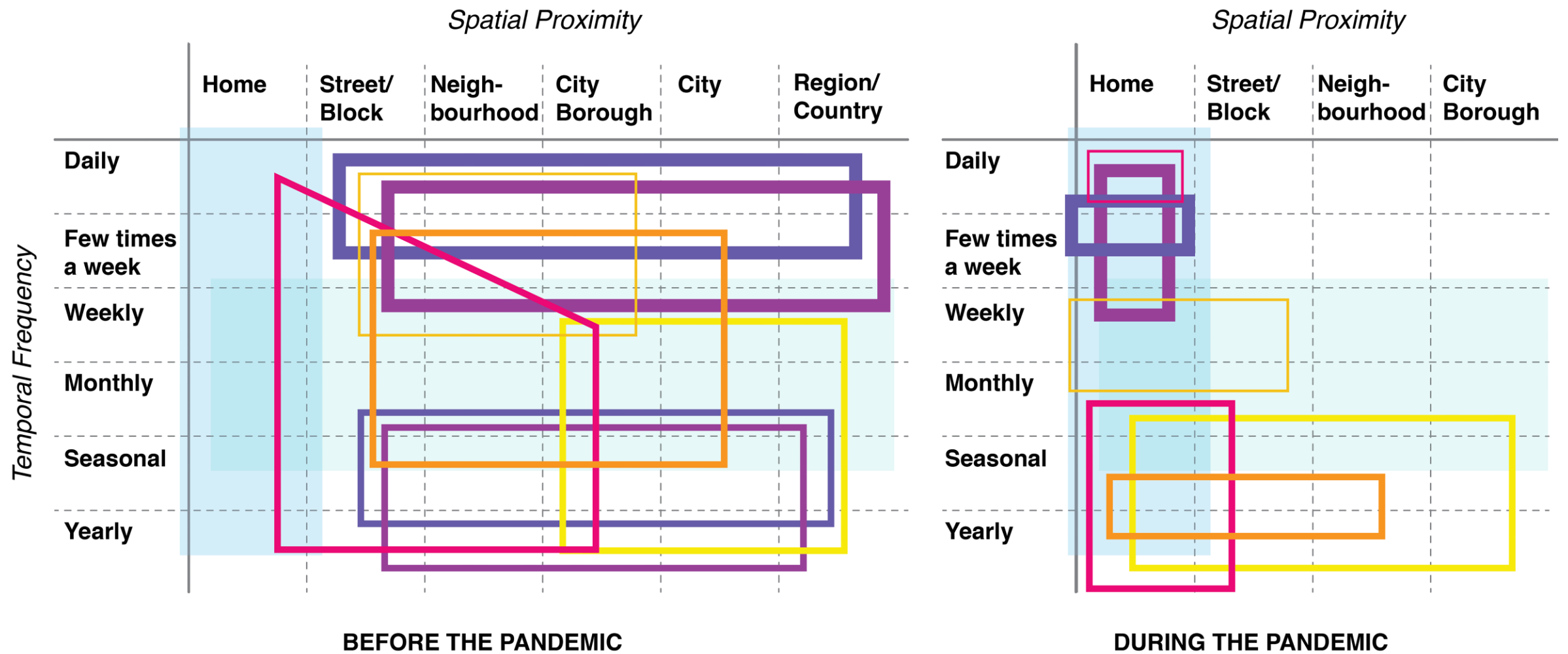
School
activities

**Culture-
related**
activities

**Interest-
based**
activities

**Local
Exchange**
activities

Recreation
activities



LEGEND

Activities

Household

Work

Culture-related

Local Exchanges

Family & Friends

School

Interest-based

Recreation

Synchronised Engagement

0 – 1 hours

1 – 4 hours

4 – 8 hours

8 + hours

Undefined

Metrics and scoring for Foam index

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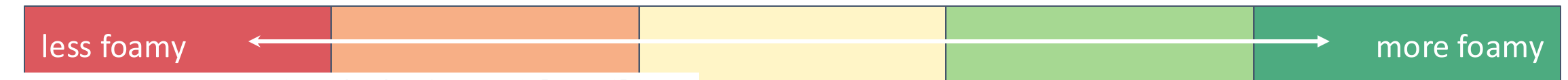
Detection of "foamy" buildings involves analyzing three key metrics:

- **Frequency of visits:** Foamy spaces have frequent visitors
- **Distance from home:** Foamy spaces are typically close to home areas of visitors
- **Dwell time:** Visitors in foamy spaces tend to have high dwell times

Each building is assigned a score from 0 to 100 based on these metrics

Higher scores indicate a higher level of "foaminess"

All metrics are derived from aggregated data collected in a GDPR-compliant manner.





Weesp
Foam Index | Index

Facilitating people to keep their own rhythm in crisis times

Identify the landscape of foams for:

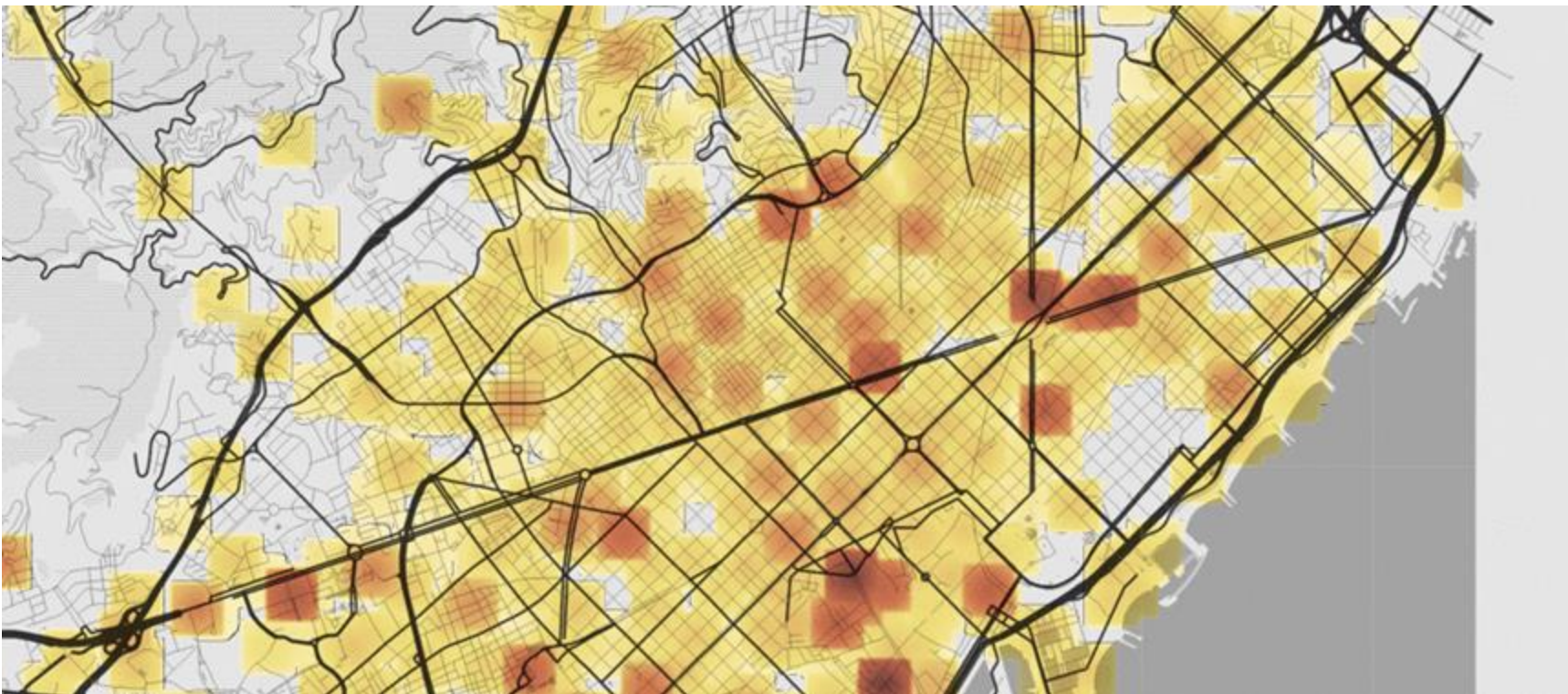
- Promoting healthy behavior messages
- Identifying target populations (e.g., ones with mental health conditions)
- Providing comfort and safety in the neighborhood

Case study: work with Amsterdam Healthcare department to map non-institutionalized foams (community places besides libraries and dedicated centers) in the district of Zuidoost and citywide



Foam Index over time

Analysis focuses on spatio-temporal patterns: foamy spaces and their rhythms. It involves utilization of techniques for analyzing map changes with time, e.g. Chronotope platform



Features

- See foamy spaces in dynamics: newly formed or extinct
- Analyse data citywide and compare specific places
- Adjust: apply different filters and parameters to different goals, geographies and time periods

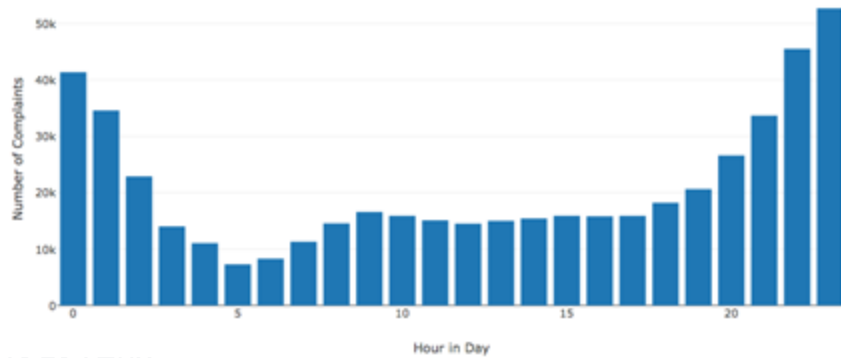
Image: Habidatum, Chronotope visualization of people concentration in space-time in Barcelona

Spatial



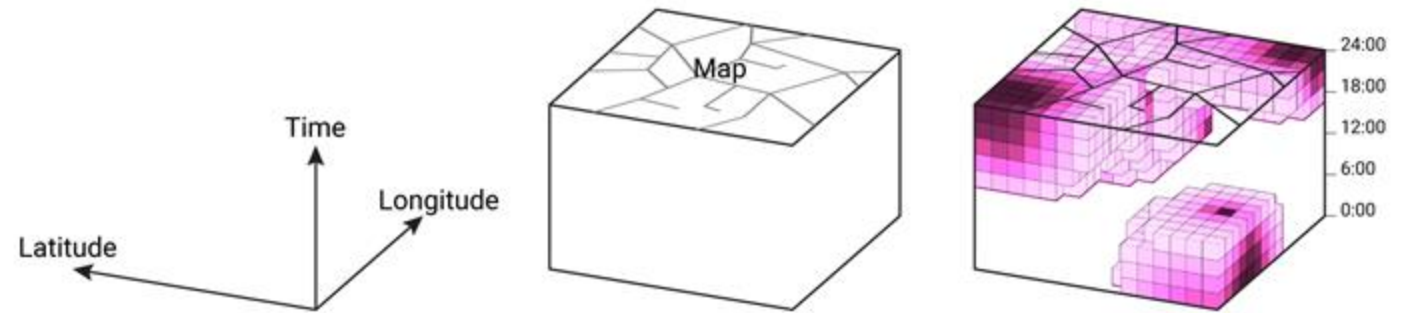
Time Series

Number of Noise Complaints in NYC by Hour in Day



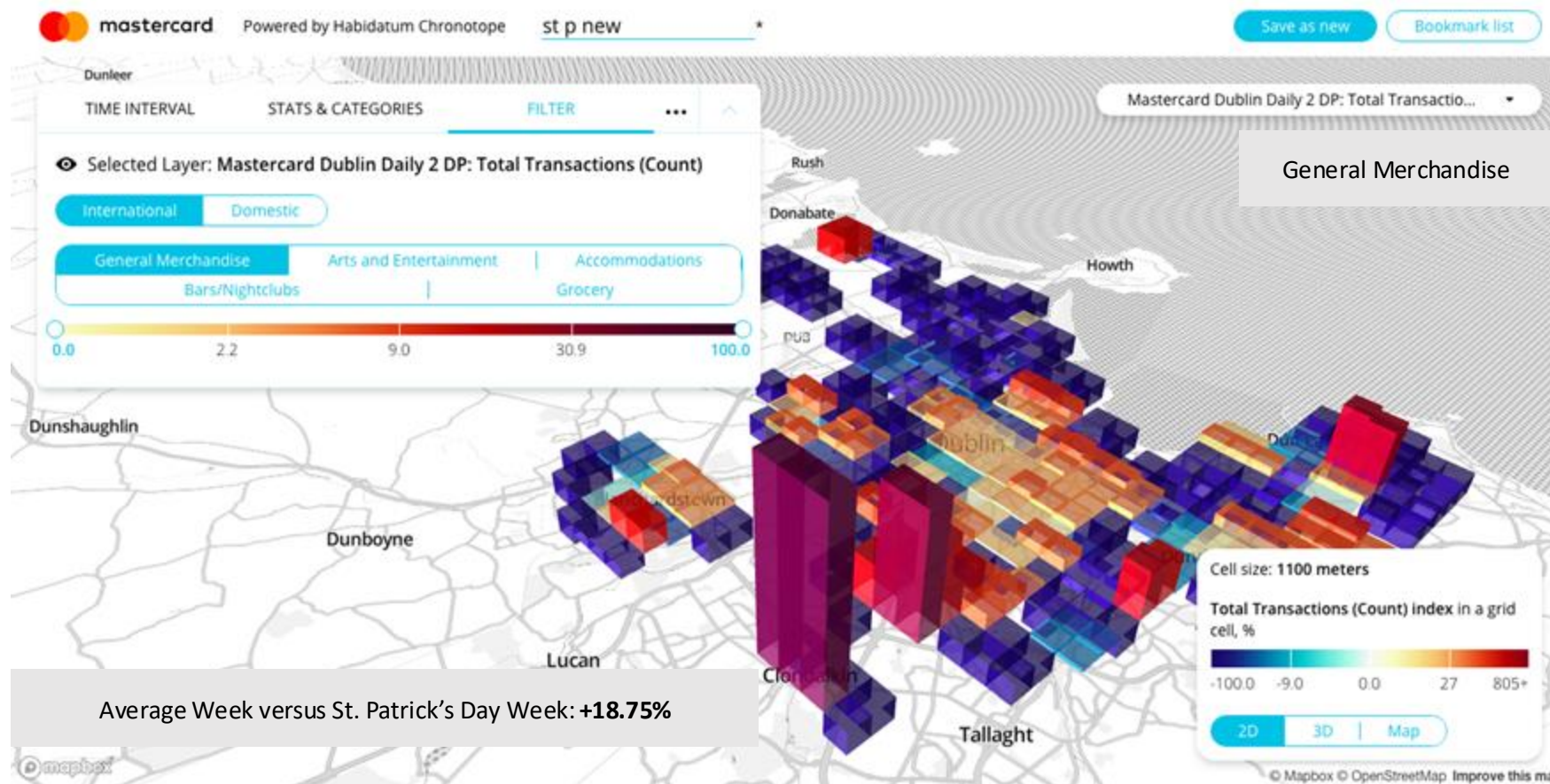
HABIDATUM

Spatiotemporal



Dublin spending

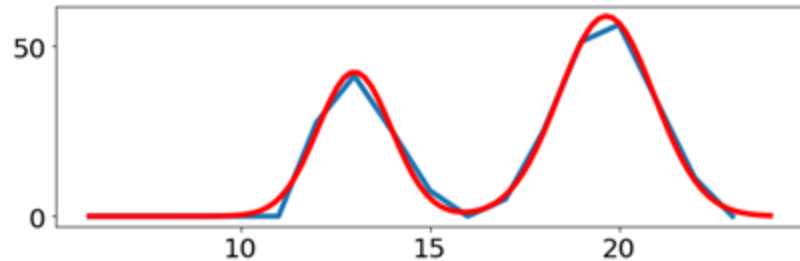
Measuring St. Patrick's day uneven impact by spending volume across Dublin for Dublin Economic Monitor and Mastercard City Insights



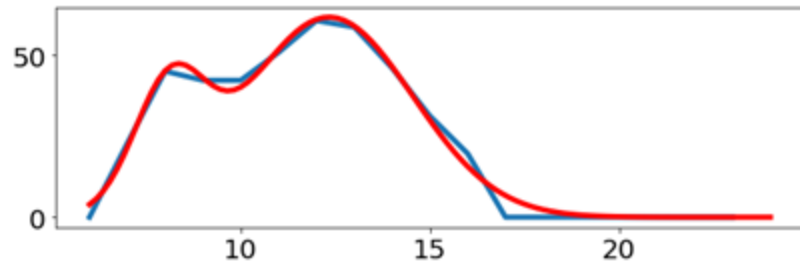
Business rhythms

Exploring daily rhythms of restaurants of various types using Google peak hours charts.

Krua by Nathong



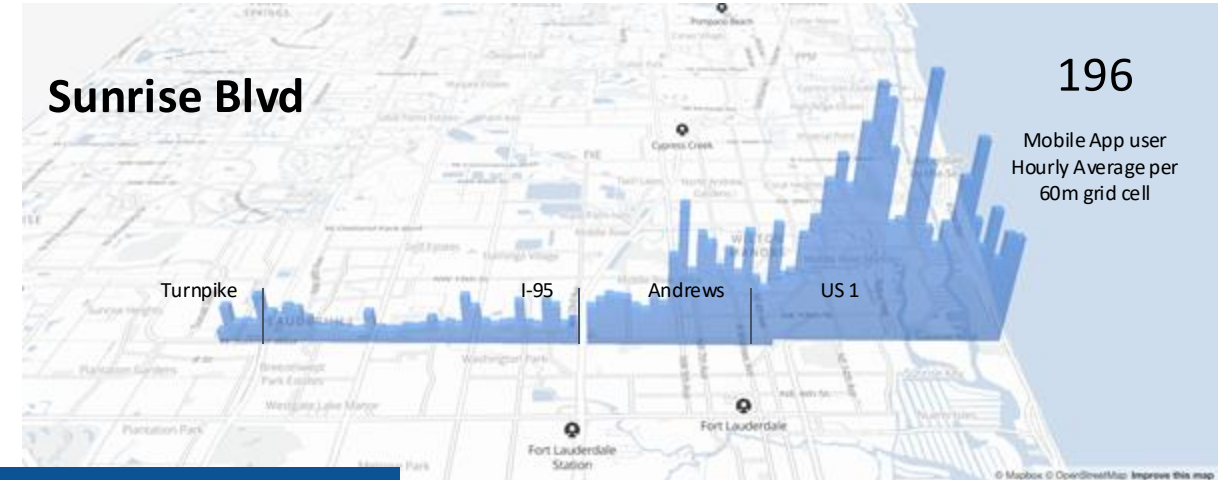
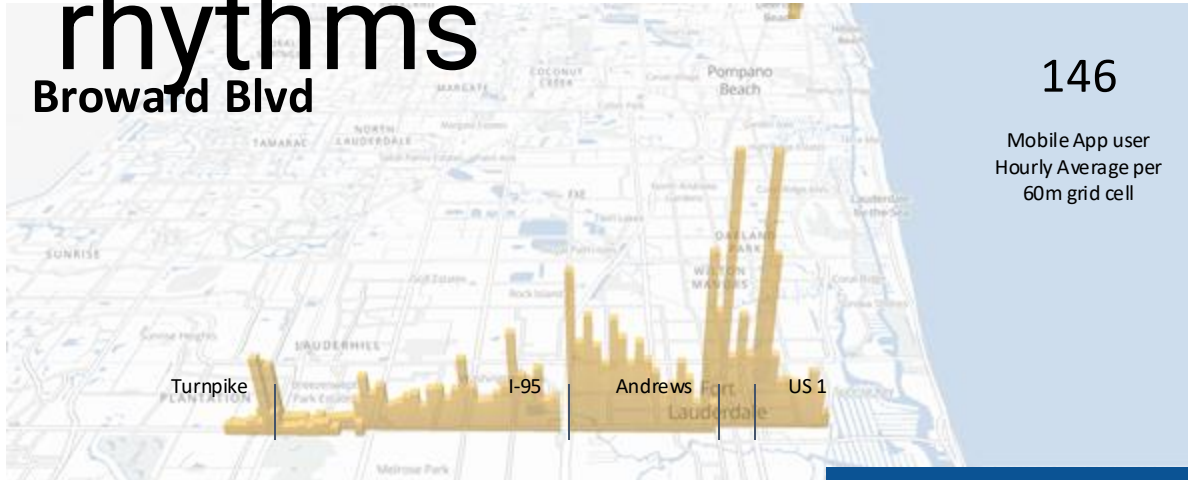
Benugo



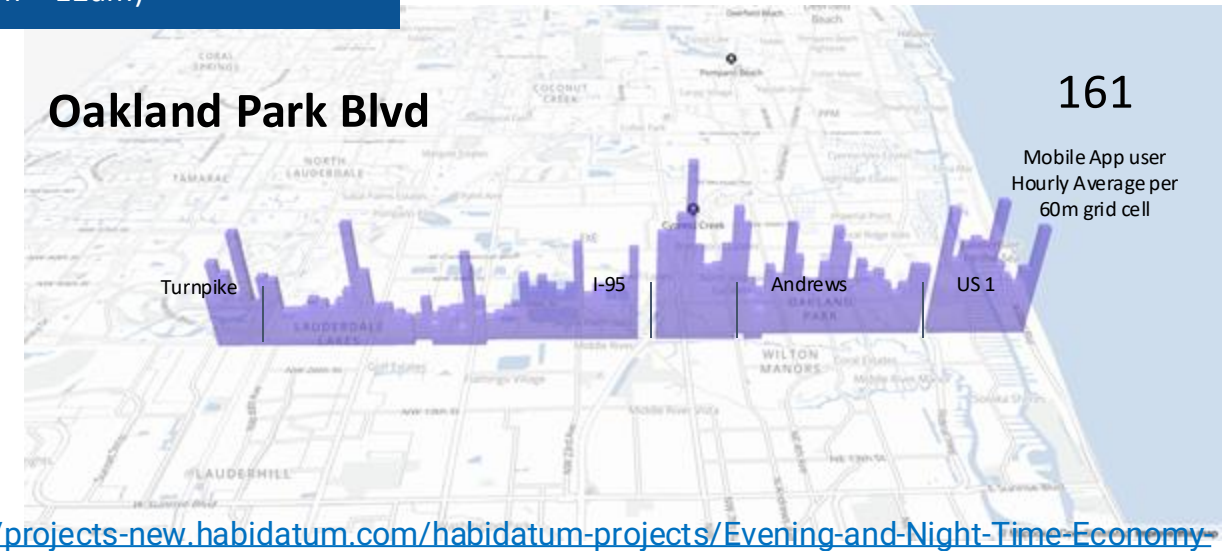
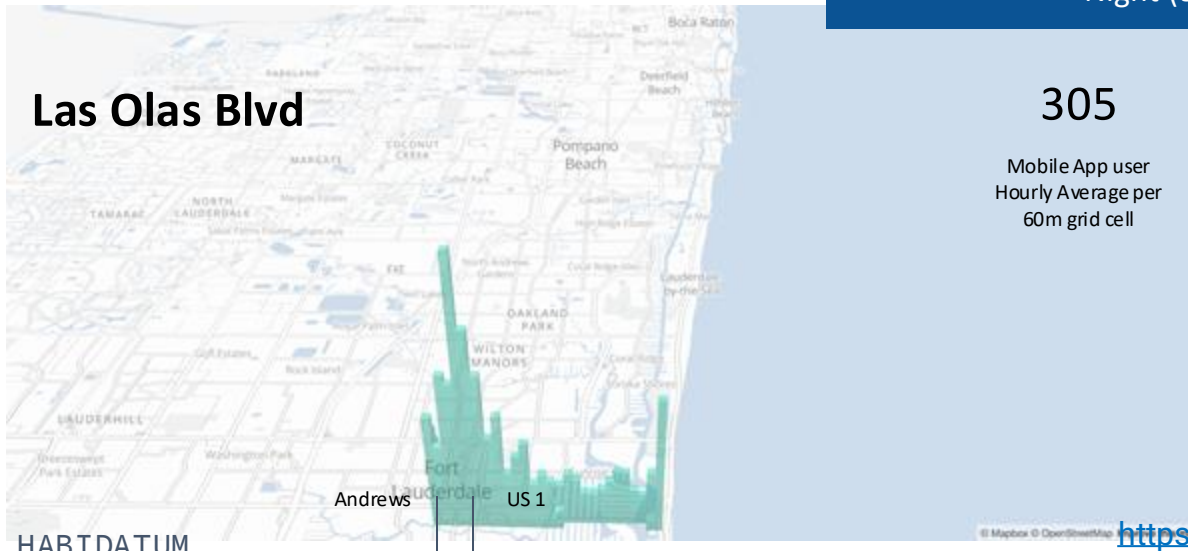
HABIDATUM



Evening and night time economy rhythms



Night (9pm – 12am)



<https://projects-new.habidatum.com/habidatum-projects/Evening-and-Night-Time-Economy-Fort-Lauderdale-Florida-35b4061b09fb4ca8b313a339c5ff97f5>

Urban Social Context

daily city life, urban activities,
SOCIAL/TEMPORAL & SPATIAL

Influence/
manage



Evidence in/
Create



Spatial Practices

architecture, urban
design & development,
policymaking, research

Rhythms and Spatio- Temporal Dynamics

ethnographic research
& big data analysis