

DATATHON 2018

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Department of business administration:

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The competition:

- ▶ Innovation
- ▶ Developing business ideas, solutions or apps based on open data
- ▶ Data analysis to make a better city



Our idea:

- ▶ Measure the quality of life of the citizen by municipal unity
- ▶ Define the factors that affect the quality of life of the citizen
- ▶ Quantification of the factors and create indicators for every factor
- ▶ Use these indicators for improvements, conclusions and proposals in Thessaloniki

The 5 factors:

- ▶ Parking spaces for disabled people
- ▶ Population concentration (factor related to security for contingent situations)
- ▶ Bike spaces
- ▶ Air pollution
- ▶ Population per municipal unity

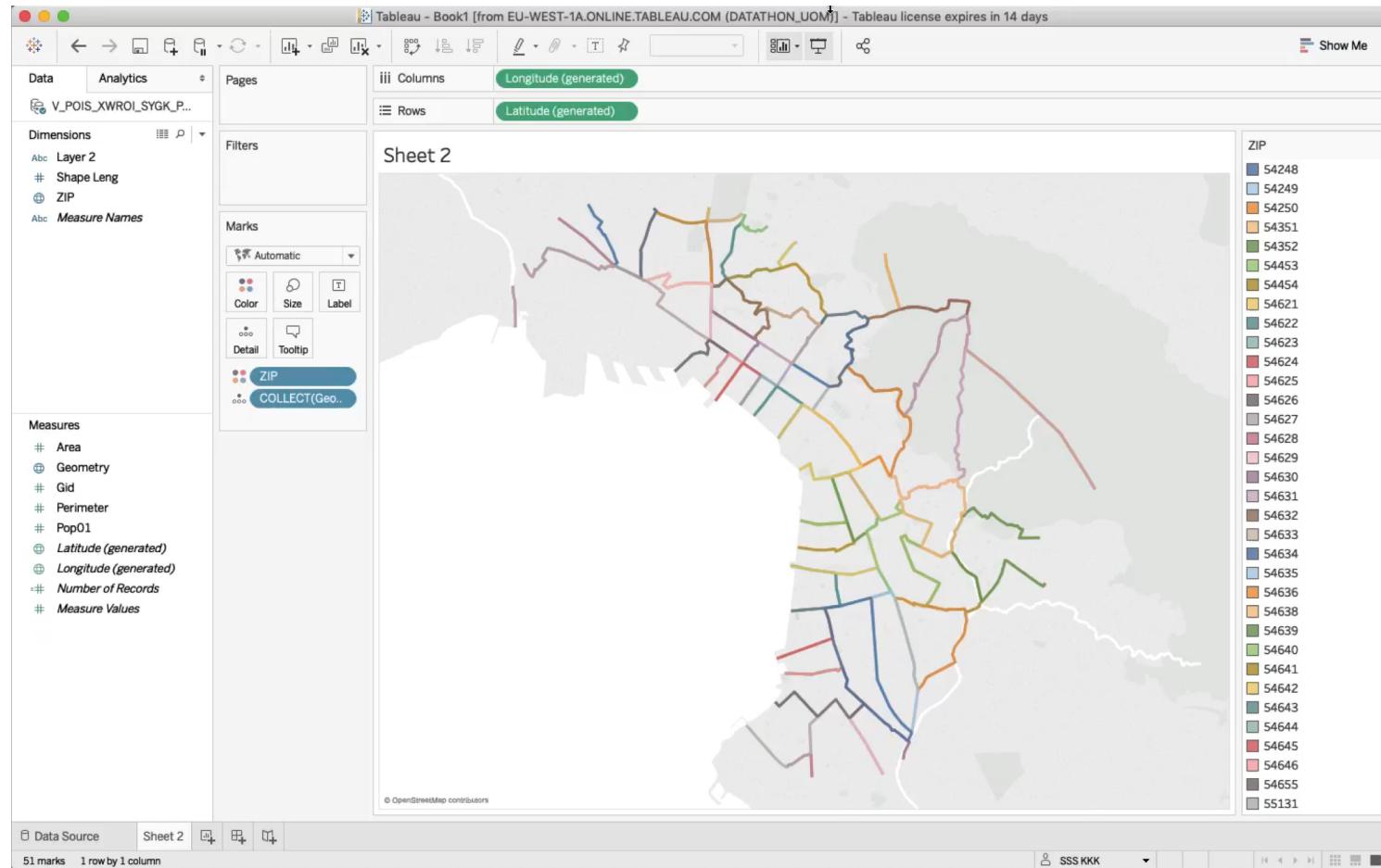
Stage 1 - Preparation

- ▶ Pumping data from various datasets:
- ▶ Read & cleaning data
- ▶ Select the appropriate data
- ▶ Define the shape of the final table
- ▶ Define the type of analysis that we'll use
- ▶ Division of tasks

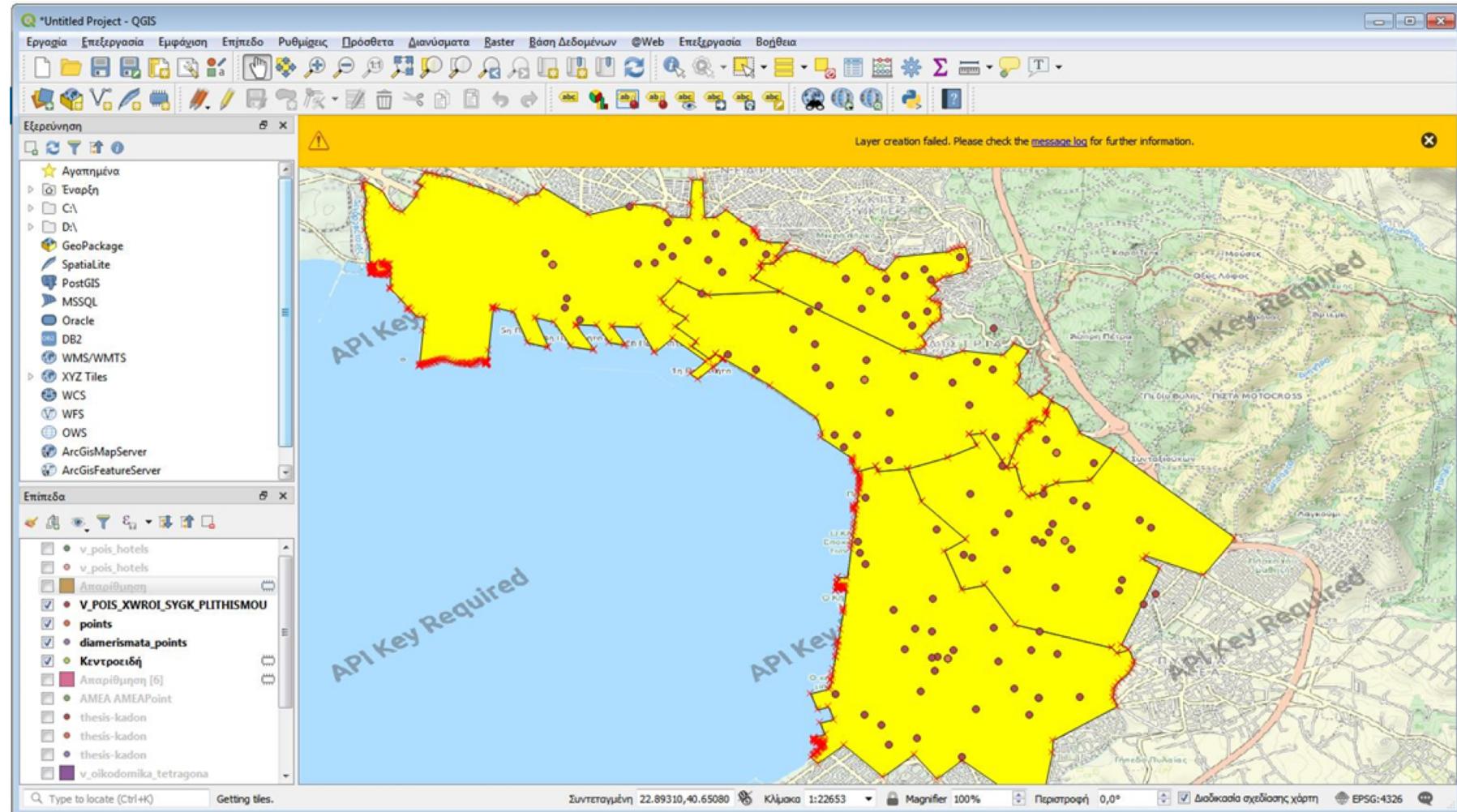
Stage 2 - Data Analysis

- ▶ Tableau / QGIS - Visualization of municipal unities on the map and extract geographical data
- ▶ IBM SPSS - Using the Z score of values for normalization & comparability
- ▶ Microsoft Excel - Cleaning data, average values, sums, creation of the final board

► Tableau (Video Demonstration)



► QGIS



► Z scores through SPSS

*Output (Document1) - IBM SPSS Statistics Viewer

File Edit View Data Transform Insert Format Analyze Graphs Utilities Extensions Window Help

Output Log Descriptives Log Descriptives Log Descriptives Log Descriptives Log Descriptives

GET DATA
/TYPE=CLXK
/FILE='C:\Users\seer\Desktop\UMPOINTS.xlsx'
/SHEET='Sheet1'
/CELLRANGE=FULL
/READNAME=ON
/DATATYPEDIN PERCENTAGE=95.0
/HIDDEN IGNOREYES.
EXECUTE.
DATASET NAME DataSet1 WINDOW=FRONT.
DESCRIPTIVES VARIABLES=Numpoints
/STATISTICS=MEAN STDEV MIN MAX.

Descriptives

(DataSet1)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Numpoints	6	10	119	42.33	42.627
Valid N (listwise)	6				

DESCRIPTIVES VARIABLES=Numpoints
/SAVE
/STATISTICS=MEAN STDEVY MIN MAX.

Descriptives

Descriptive Statistics

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Descriptives

Descriptive Statistics

Stage 3 - Presentation of the final board (Z-scores)

Δημοτική Ενότητα	Πληθυσμός	Θέσεις Στάθμευσης Αμέα	Συγκέντρωση Πληθυσμού	Στάθμοι Ποδηλάτων	Ρύποι στον αέρα
A	53017	0,50828	0,30182	2,0047	-0,00436
B	35962	-0,66468	-0,10061	-0,39446	-0,25
Γ	31805	-0,66468	-0,50303	-0,52414	0,029
Δ	92882	-0,21895	0,30182	-0,52414	0,369
Ε	150321	1,79854	1,50908	-0,03782	1,287
ΣΤ	11289	-0,75852	-1,50908	-0,52414	-0,00748

- ▶ Indicator > 0 - Indicator is (value)*std above the mean
- ▶ Indicator < 0 - Indicator is (value)*std below the mean

Proposals

- <https://imc.thessaloniki.gr/imc>

Thank you for your attention!