Analyze Graph Tool

Graph networks can be analyzed by computing global integration, local integration and inbetween centrality.
For each street these three values are computed and stored as object attribute "integrationGlobal", "integrationLocal" and "inbetweenCentrality". The values can be visualized or used also to approximate street widths.

Highest Centrality Value — Lowest Centrality Value

Visualize analysis (assign rule):
Computes the three analysis values and assigns a visualization rule file to the street shapes. Model generation is automatically triggered.

- Global integration

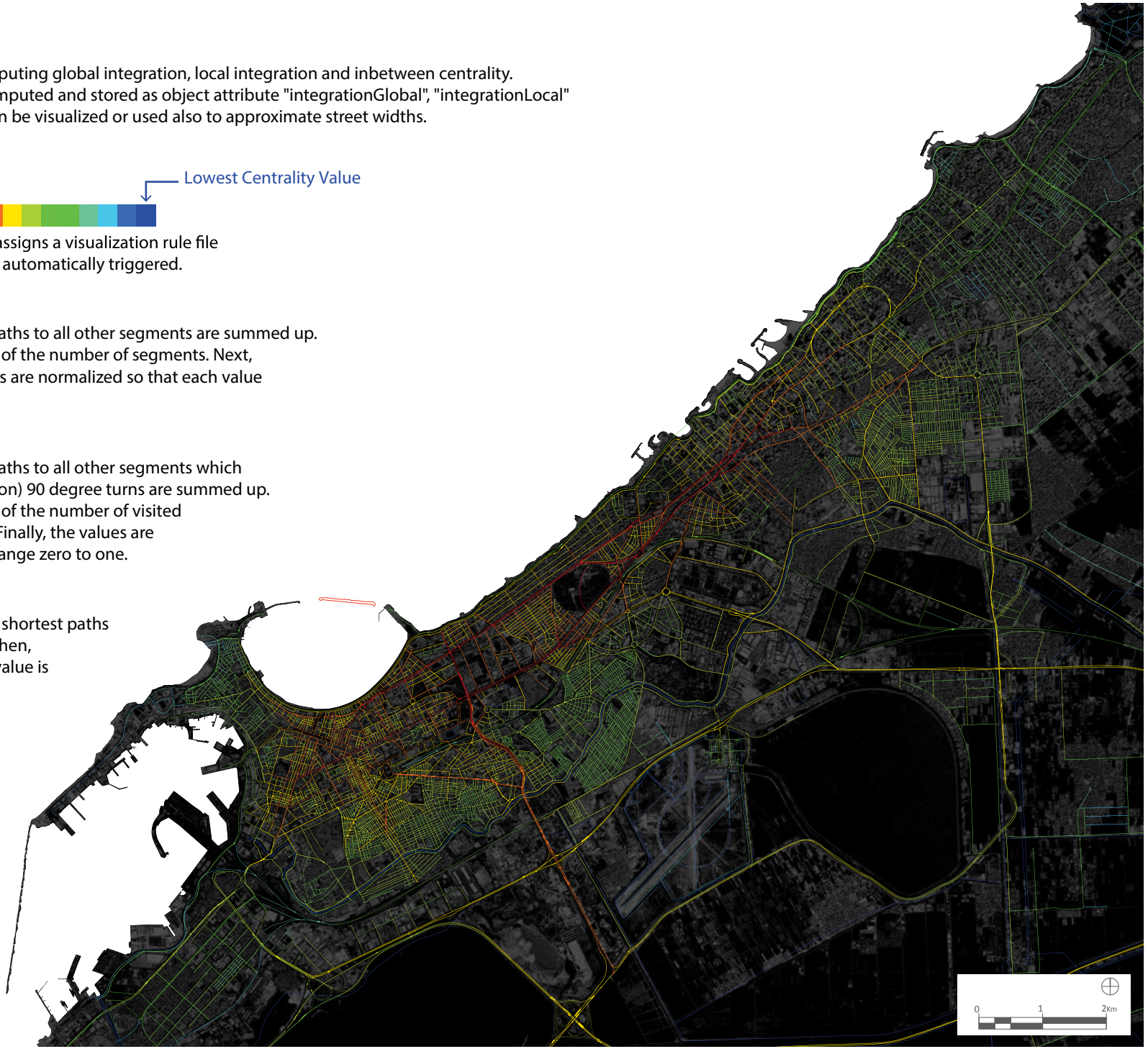
For each street segment, the shortest paths to all other segments are summed up. Each sum is then divided by the square of the number of segments. Next, each value is inverted. Finally, the values are normalized so that each value is in the range zero to one.

- Local integration

For each street segment, the shortest paths to all other segments which are closer than (Depth of local integration) 90 degree turns are summed up. Each sum is then divided by the square of the number of visited segments. Next, each value is inverted. Finally, the values are normalized so that each value is in the range zero to one.

- Inbetween centrality

For each street segment, the number of shortest paths which pass this segment is computed. Then, the values are normalized so that each value is in the range zero to one.



STREET NETWORK ANALYSIS:
Outcomes of application of automated tool (City Engine)