

View

# Integration Platform for City Management

NeoCityLab B.V.

### The Idea

Development of an integrational platform for unification and mapping of all geodata with photopanoramic view and laser scanning data to

• visualize

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- navigate
- integrate
  - analyze

the surrounding geo-environment to be a basis for Smart City solutions.



### One Platform as a Basis for Smart City

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3 main stages of the platform creation:

#### Data processing to visualize, navigate

from mobile scanning from different types of scanning systems (\*.LAS files), panoramic images, data from the top (aircrafts, drones), any other geo data (maps, etc.)

#### Analytical tools

algorithms to analyze the city environment (measure, object recognition, embedding objects, retrospective analysis, etc.)

#### > Data integration from other different urban data bases

real estate register, cadaster, land agreements, historical info, etc.



## The Basis Idea of the Platform

The idea is based on combination of panoramic photography with a depth buffer created out of point cloud and so each pixel at the panorama has a geo reference.

End user gets a user friendly tool – easy to operate, navigate, analyze and manage any area.

Each NeoCity point has a geo reference & 3 visual solution



### The Solution

The major problems in the field we solve:

Data quality improving received from the drones, satellite, aircrafts. a significant amount of information is not available from the top

Complete image of the surrounding space we use the combination of raster and vector data.

#### > Flexible, operable and modular system (API)

*Our solution is for all kinds of devices (mobile, IOS, Android, etc.) API to integrate and be integrated* 

#### Time and costs effective technology

one average European city is ready in a month. 100 -150 km per day.

### **Analytical and Management Tools**

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New 3D form of representation of urban space.

#### Resource Management

Urban Asset Inventories, Property Tax Management, Infrastructure management, Water and Land Management, Emergency, etc.

#### Territory Planning

Plan development, visualization and maintenance

Urban Data Integration and Analysis

24.74M<sup>2</sup>

all data from different resources in one panorama to evaluate an analyze

79.41M

24k3

22/14

Retrospective Analysis of territory changes

### **Urban Inventory: Object Recognition**

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- Standard Infrastructure Object Recognition
- Building recognition
- Other objects recognition

Automatic recognition of road signs, poles, hatches, billboards, building facades, bus stops, road boundaries and other road infrastructure objects with a high level of accuracy (up to **95%**).



### **City Planning: Embedding New Objects**

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Any object can be embedded into panorama.

Once embedded the object becomes a part of environment and can be seen from any place on the panorama.



### One Platform – Many Unlimited Users Benefits



### **Benefits of the Platform**

- Synergy One solution for many different types of users
- > Unification and standardization of geodata flow in general
- User friendly you can use the data and work with it from any device (including mobiles); no special learning is needed.
- > Time savings average European city is ready in 4-5 weeks for end users.
- > API to integrate and be integrated to other software, data
- Cost optimization synergy and automated data processing



Thank you!

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