



# Build Your First Project With OpenCities Planner

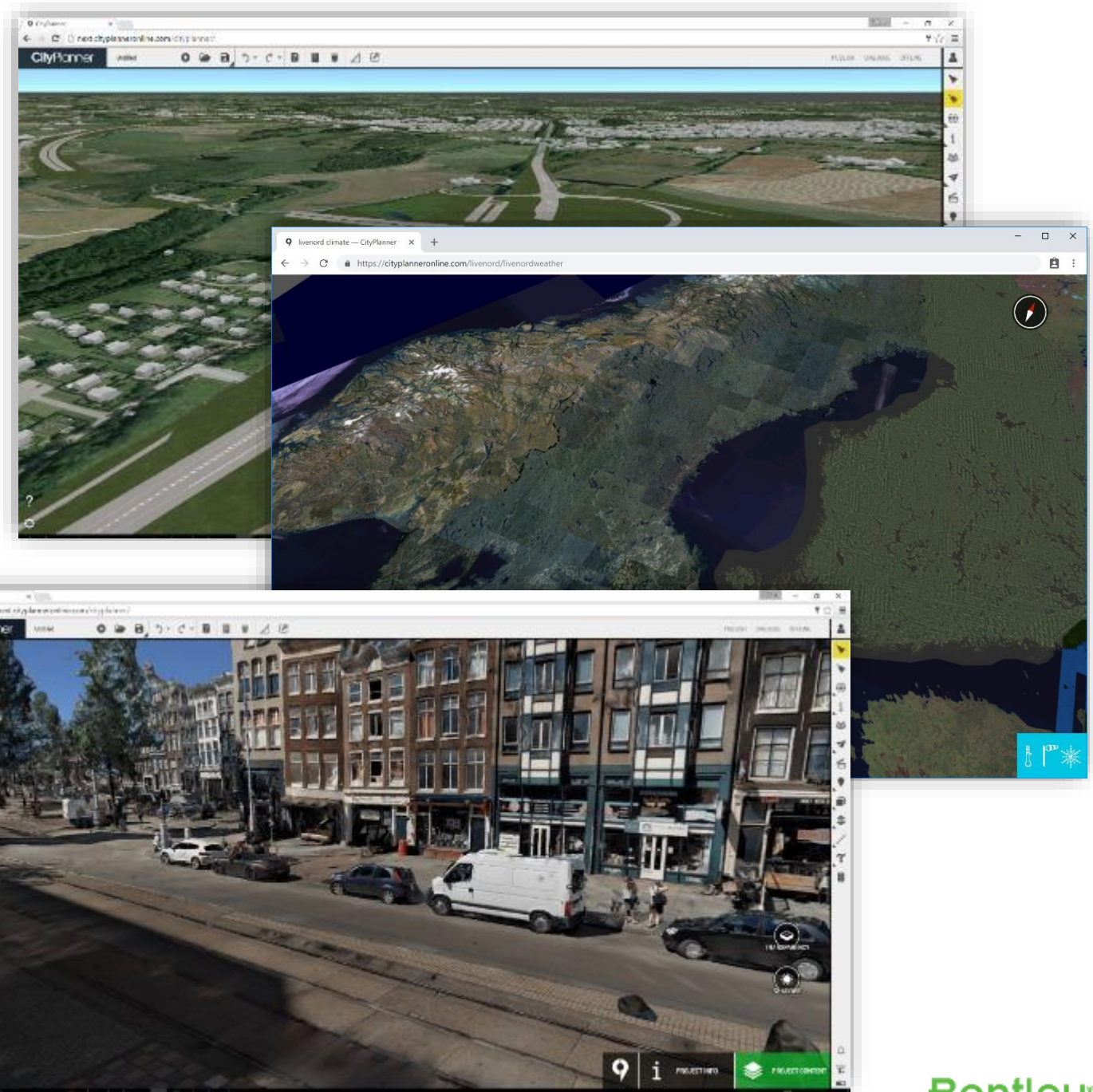
TMC Winterschool Workshop, November 2019  
Presenter: Irma Alii and Kees van Prooijen





# OpenCities Planner

- Cloud application
  - Visualize entire cities and countries with streaming technology
  - Handles massive datasets and local SRS/coordinate systems
- Use
  - Terrain models
  - Aerial imagery
  - Reality models
  - Semantic city models such as
    - CityGML, KMZ, COLLADA
  - Point clouds
- Web browser, mobile, desktop, VR







# Järfälla

<https://cityplanneronline.com/jarfalla/soderhojden>



# Kristianstad

<http://cityplanneronline.com/kristianstad/kristianstadskommun>



# Gothenborg

<https://cityplanneronline.com/agency9/gothenburgatmipim>



# Architecture competition

<https://cityplanneronline.com/sundbyberg/rosentornet>



# Project Survey

<http://beta.cityplanneronline.com/cityplanner/project/webgl/index.do?uid=edRn36ys>

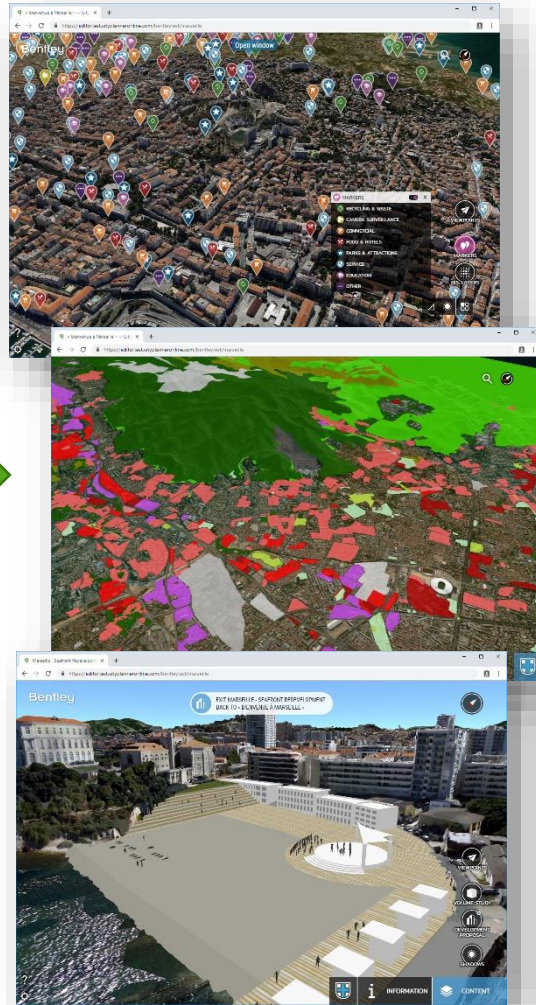
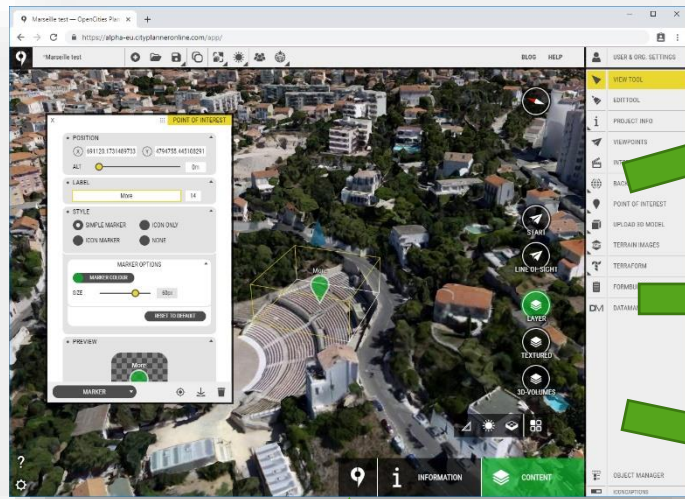


# City Dialog

<http://beta.cityplanneronline.com/cityplanner/project/webgl/index.do?uid=edRn36ys>



## Project Editor



## Team, Stakeholders, Citizens



## Project content

- WMS, Geo Images, Shape
- 3D CAD models
- Points of interest
- Questionnaire form
- Editor Tools: Sketching, Shadows, Videos

# Files

- 3D-models, such as a 3D city set
- DSM/DTM
- Ortho Images
- Reality Models
- Point clouds
- Vector

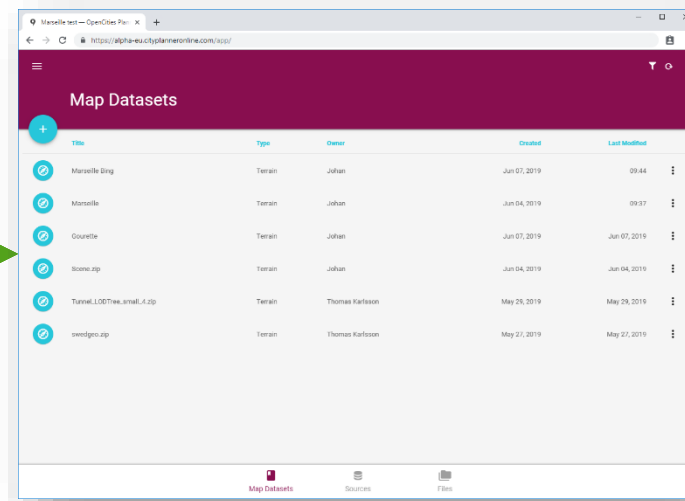
# Services

- WCS
- WMS
- TMS
- WMTS
- ESRI ImageService
- DigitalGlobe ImageService
- Slippy map
- Bing layout

# Databases

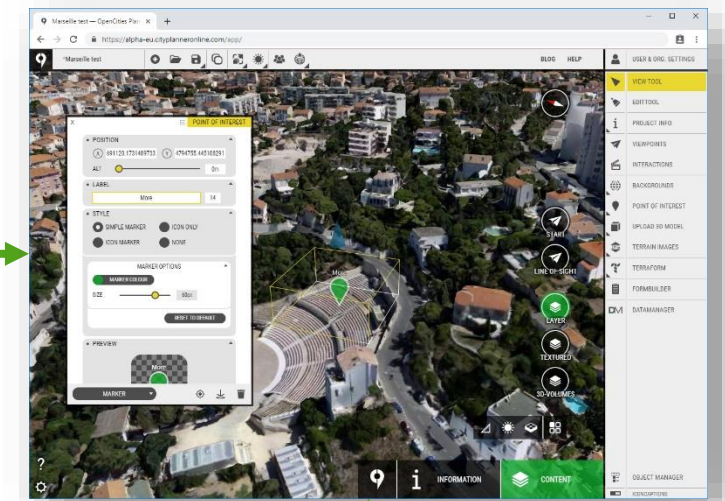
- Spatial databases such as Oracle Spatial, PostGreSQL etc
  - Geometry and attributes
- 3DCityDB (CityGML) or custom database layout

## DataManager



OCP streaming format

## Project Editor

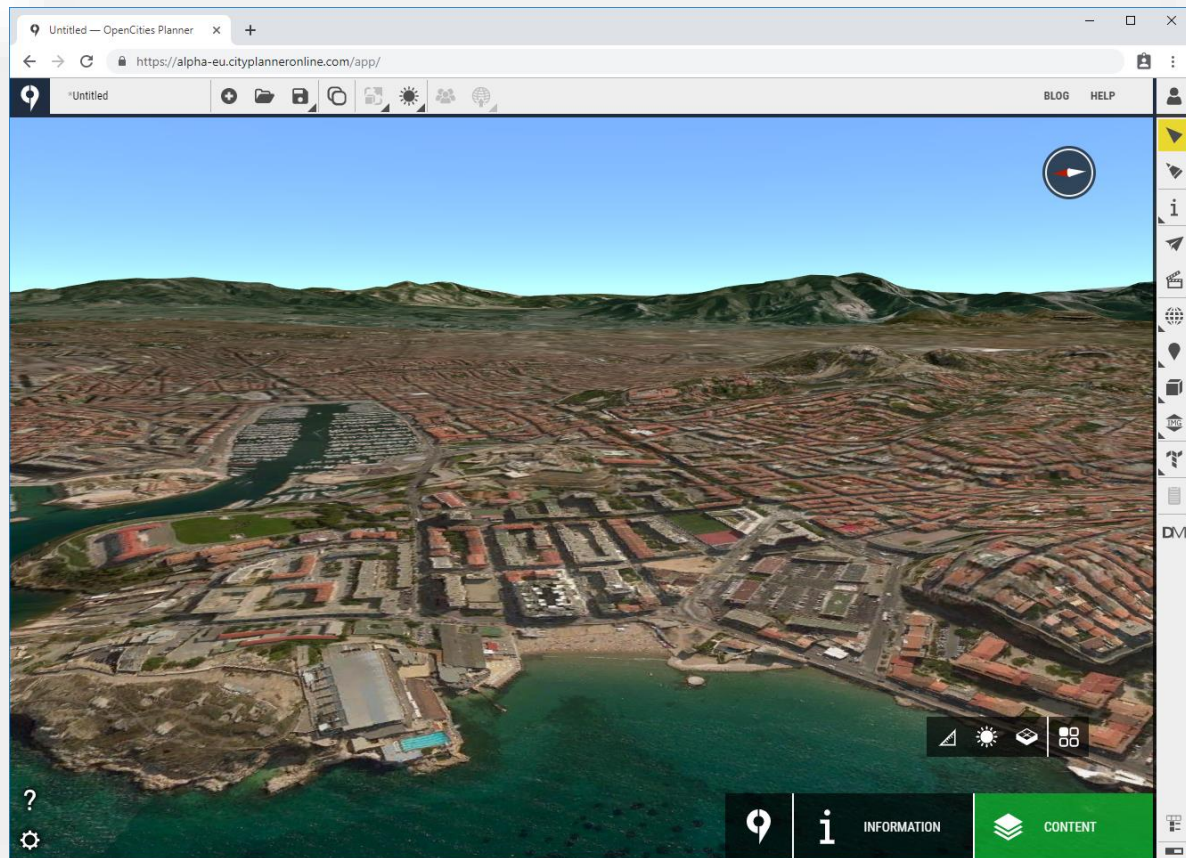


## Project content

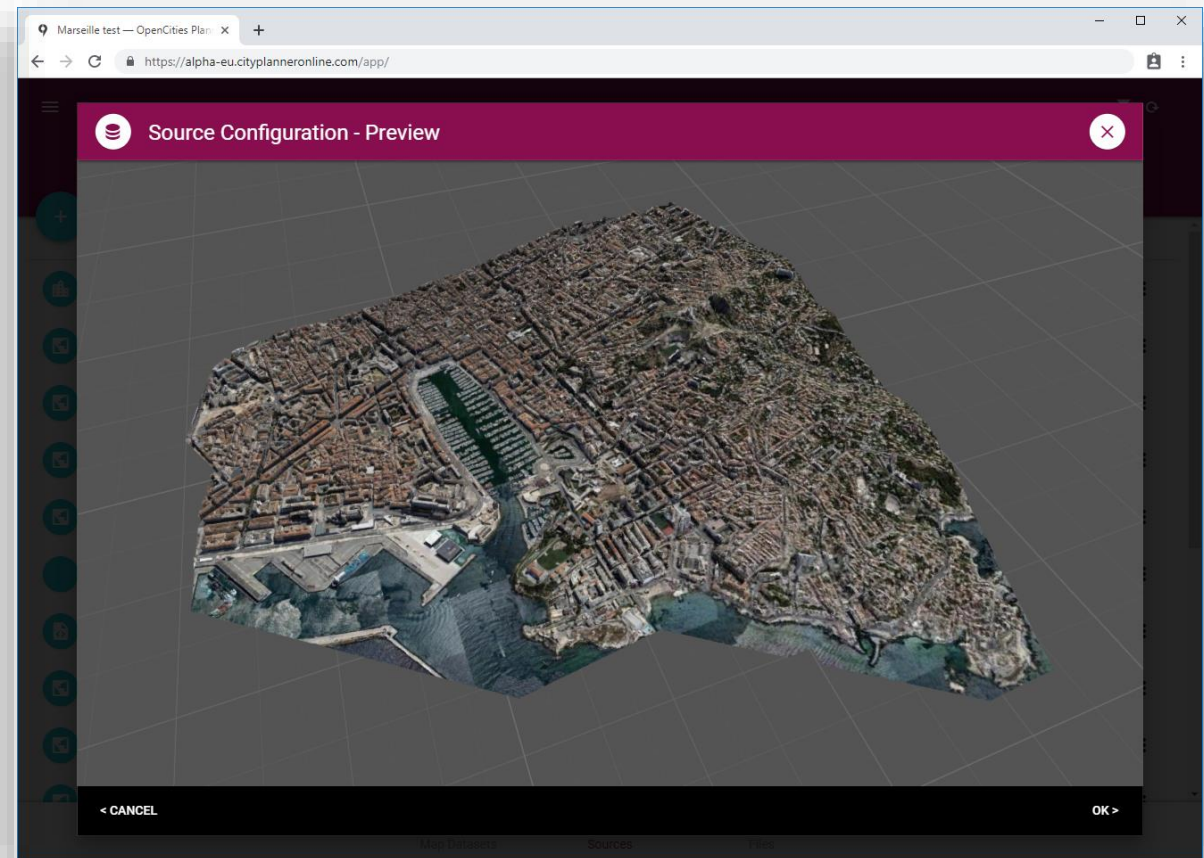
- WMS, Geo Images, Shape
- 3D CAD models
- Points of interest
- Questionnaire form
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# OpenCities Planner - DataManager



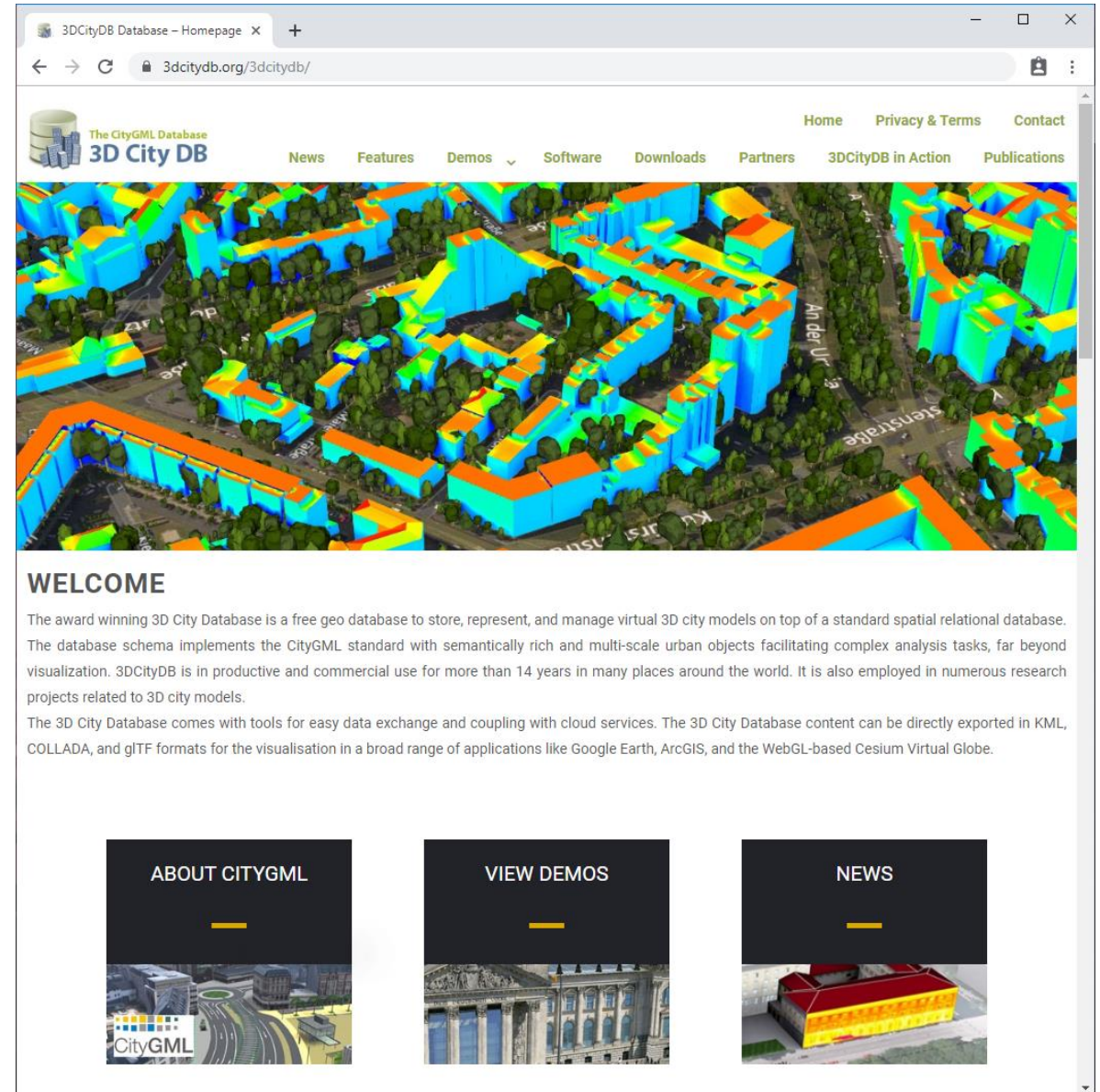
Bing maps



Reality model

# CityGML & 3DCityDB

- CityGML
  - OGC Standard for semantic 3D cities
  - LODs, textures, street furniture
- 3DCityDB
  - Database mapping of CityGML schema
  - Plug and play
- Import CityGML into a 3DCityDB
- Configure access
  - DataManager IP must have read access
  - User with read access



3DCityDB Database – Homepage x +

3dcitydb.org/3dcitydb/

The CityGML Database  
**3D City DB**

Home Privacy & Terms Contact

News Features Demos Software Downloads Partners 3DCityDB in Action Publications

**WELCOME**

The award winning 3D City Database is a free geo database to store, represent, and manage virtual 3D city models on top of a standard spatial relational database. The database schema implements the CityGML standard with semantically rich and multi-scale urban objects facilitating complex analysis tasks, far beyond visualization. 3DCityDB is in productive and commercial use for more than 14 years in many places around the world. It is also employed in numerous research projects related to 3D city models.

The 3D City Database comes with tools for easy data exchange and coupling with cloud services. The 3D City Database content can be directly exported in KML, COLLADA, and glTF formats for the visualisation in a broad range of applications like Google Earth, ArcGIS, and the WebGL-based Cesium Virtual Globe.

**ABOUT CITYGML**

**VIEW DEMOS**

**NEWS**

CityGML



# Updating the 3DCityDB

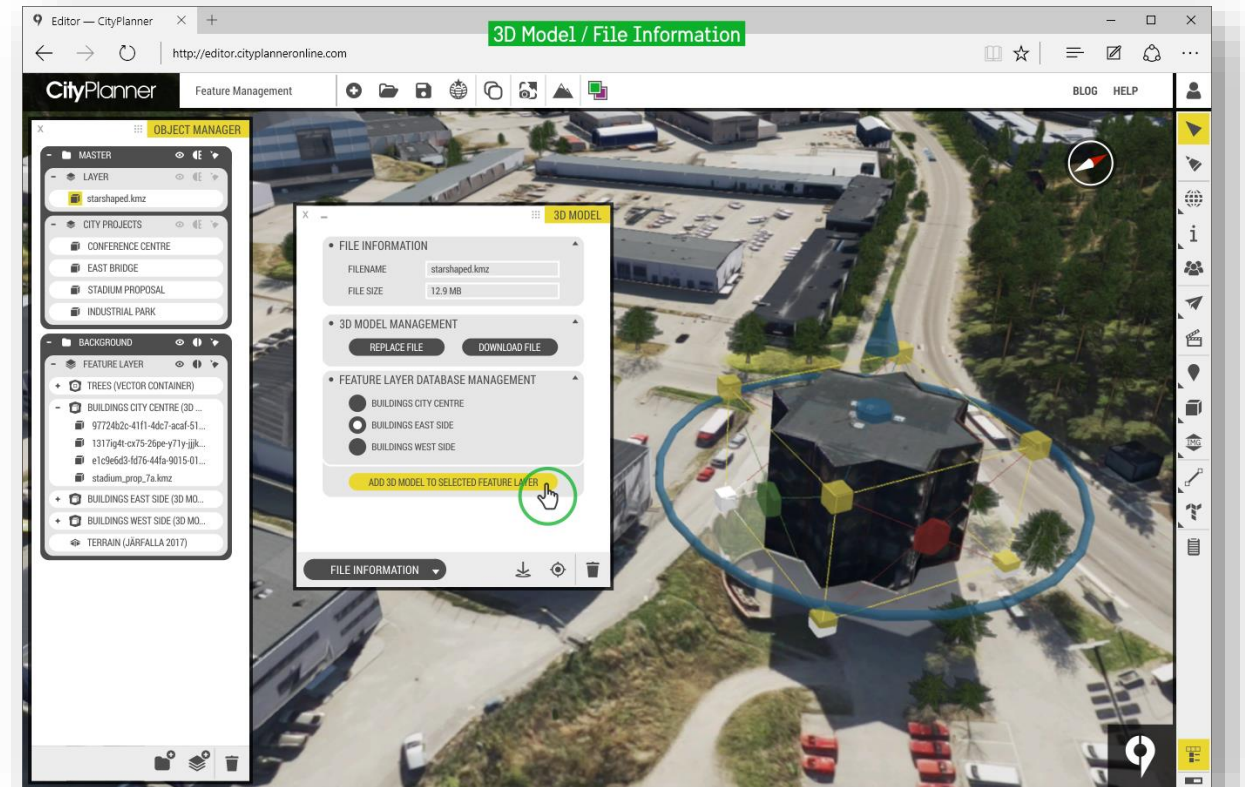
- If the source was set to Editable, you can:

- Add
- Remove
- Update
- Download

- In Editor:

- Go to properties
- Data sources
- Edit Data Sources

- Edit and then Commit changes





Marseille - Théâtre Silvain Development

Seafront Redevelopment

Housing Development

# Reality model + Spatial Database

<https://editortest.cityplanneronline.com/bentleytest/marseille>



VIEWPOINTS



MARKERS



GIS-LAYERS



INFO



CONTENT



# Summary

- Web application that let's you visualize 2D, 3D, GIS without any installations
- Web interface that supports self provisioning of datatypes
  - Ortho, Aerial imagery
  - WMS, WCS
  - Reality Models, semantic 3D-city models and street furniture,
  - Spatial databases



# Publish and share

## Desktop, Web

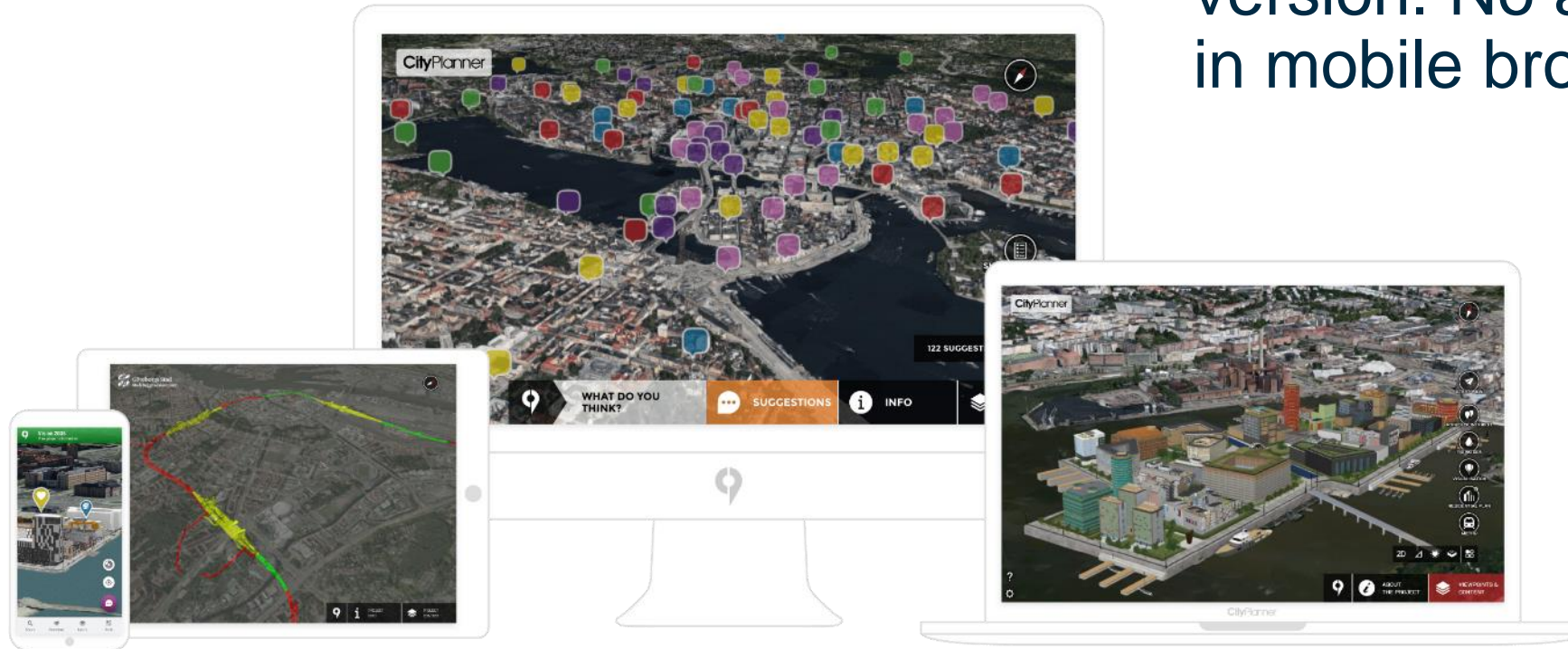
Invite team members or share a link with no login required.

## Mobile and Tablets

Supports both real-time 3D and low end panorama images version. No app installation, run in mobile browser.

## ShowRoom

Offline version built for exhibitions and showrooms.





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**Thank you!**

For more information, please visit:

[www.Bentley.com/OpenCitiesPlanner](http://www.Bentley.com/OpenCitiesPlanner) and  
<https://eu.opencitiesplanner.bentley.com/site/>

We invite to use OpenCities Planner for creating your own projects during your 1 month trial.

For more information, contact Irma Alii on:  
[irma.ali@bentley.com](mailto:irma.ali@bentley.com)