AGENCY 9

Extended investments in terrain and 3D city models by online provisioning

Håkan Engman, CEO

BUILD SMARTER CITIES

3D VISUALISATION

COLLABORATION

CROWD SOURCING

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Online 3D stimulate growth

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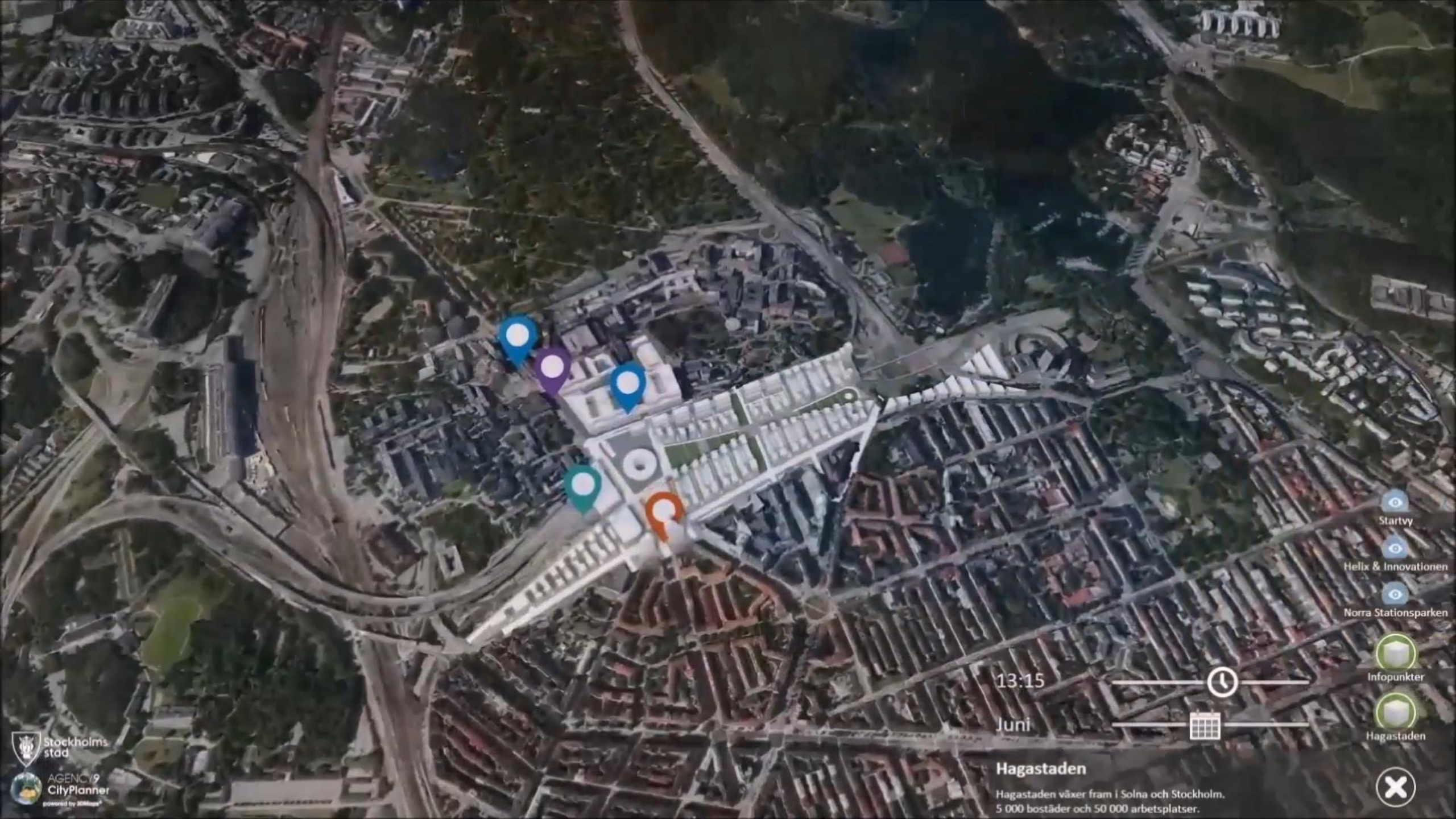
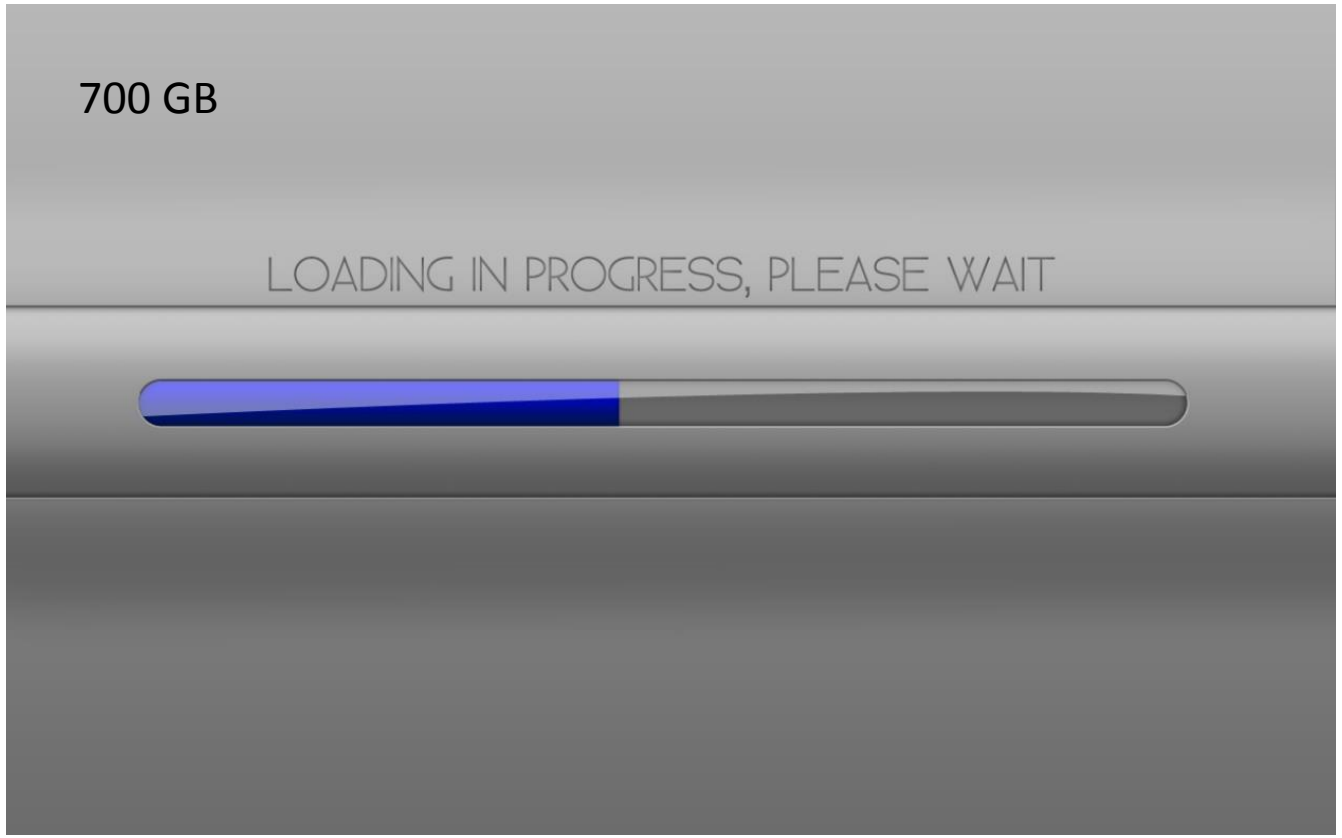
- Founded 2003 in Sweden
- 40 man years invested in online 3D
- 3DMaps streaming large 3D data sets
  - Free developer kit for WebGL
  - Data agnostic content pipeline
  - Scalable and multiplatform
- CityPlanner 3D cloud service
- Over 40 customers worldwide

Scale and distribution


Startvy
Helix & Innovationen
Norra Stationsparken
Infopunkter
Hagastaden
13:15
Juni
Hagastaden
Hagastaden växer fram i Solna och Stockholm.
5 000 bostäder och 50 000 arbetsplatser.
Stockholms stad
AGENCY9
CityPlanner

3D is big data

- Processing
- Storage
- Distribution



Online 3D goes WebGL

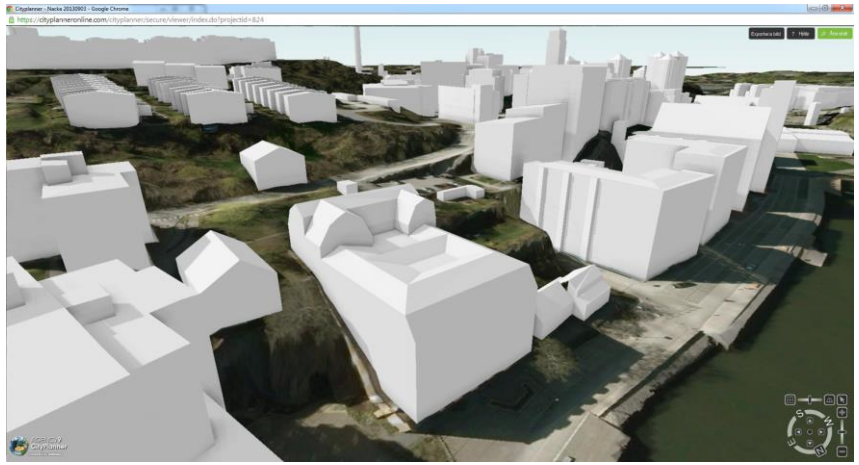
- Plug-in free
- Immediate launch
- Easier to integrate web
- Multiple platform support

Trend
Chrome, IE restricts plugins 2H15
Mobile apps limits user base

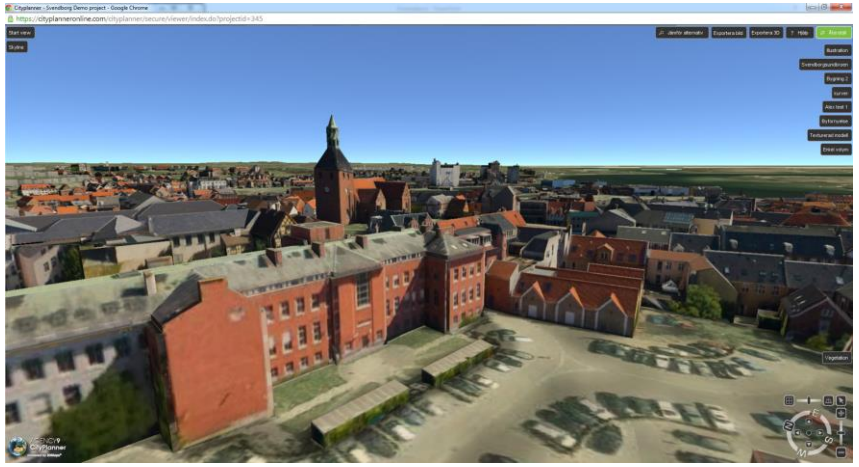
Extended number of users

Different types of 3D models

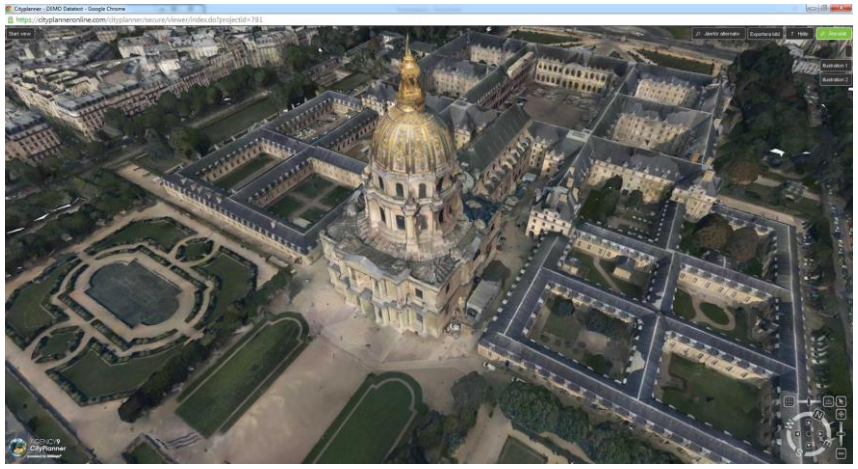
LOD1: Simplified buildings with flat roofs



LOD2: Buildings with roof details

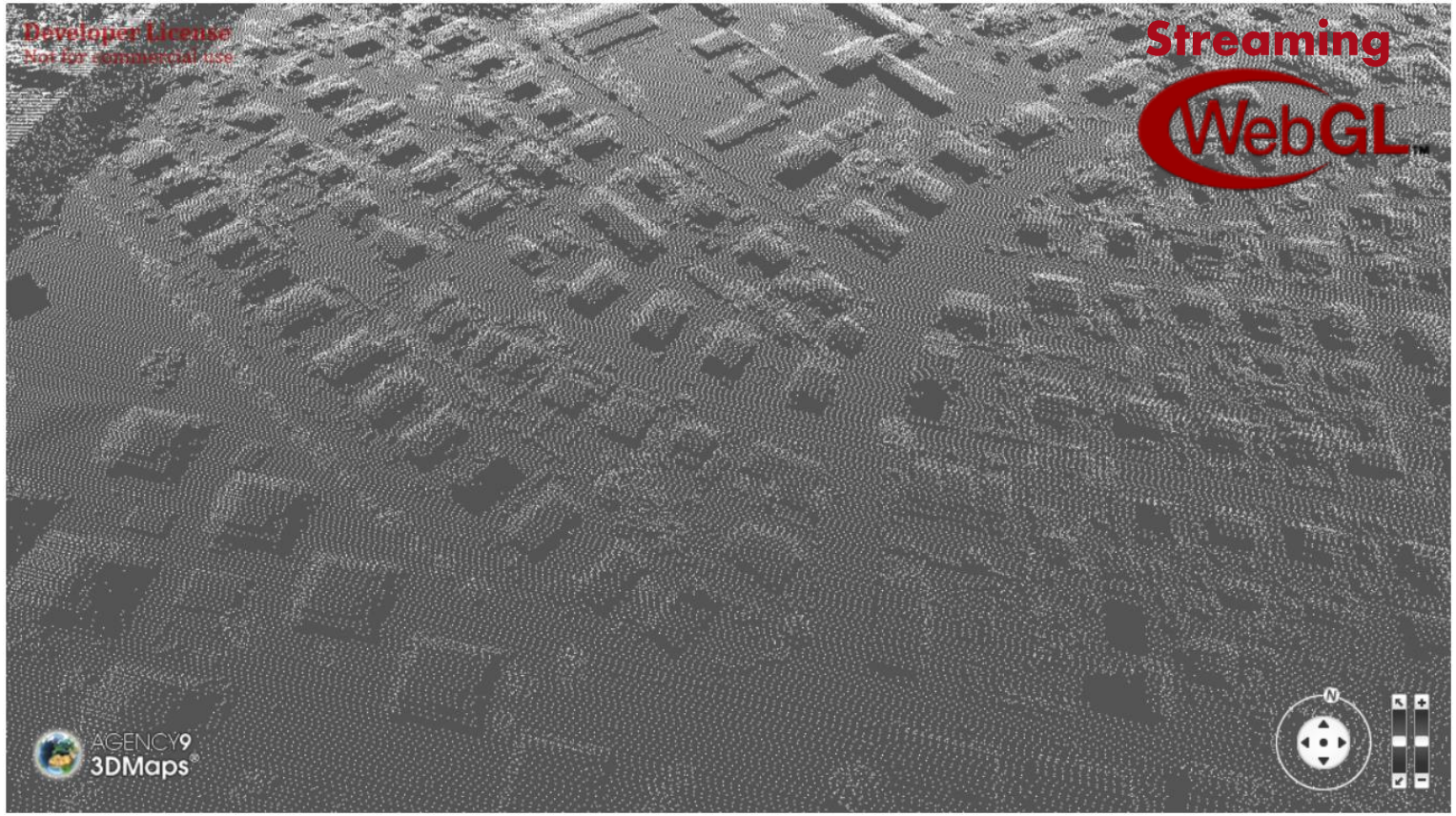


LOD3: Buildings with facades textures



Photorealistic 3D -Digital Surface Model (DSM) eg StreetFactory, Smart3DCapture, Photoscan, VriCom

Streamed Point Cloud data

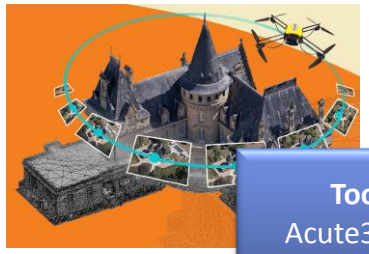


3D Data Online Platform

Online Access

Data Export

3D expert tools



Tool users
Acute3D, Agisoft,

Data providers

Cities

UAV Operators

Consultants

Data provider opportunities

- Project efficiency (Time To Value)
- Multiple sale of data
- New business models (rental, views, upgrade)
- New upsell opportunities

Provisioning principle

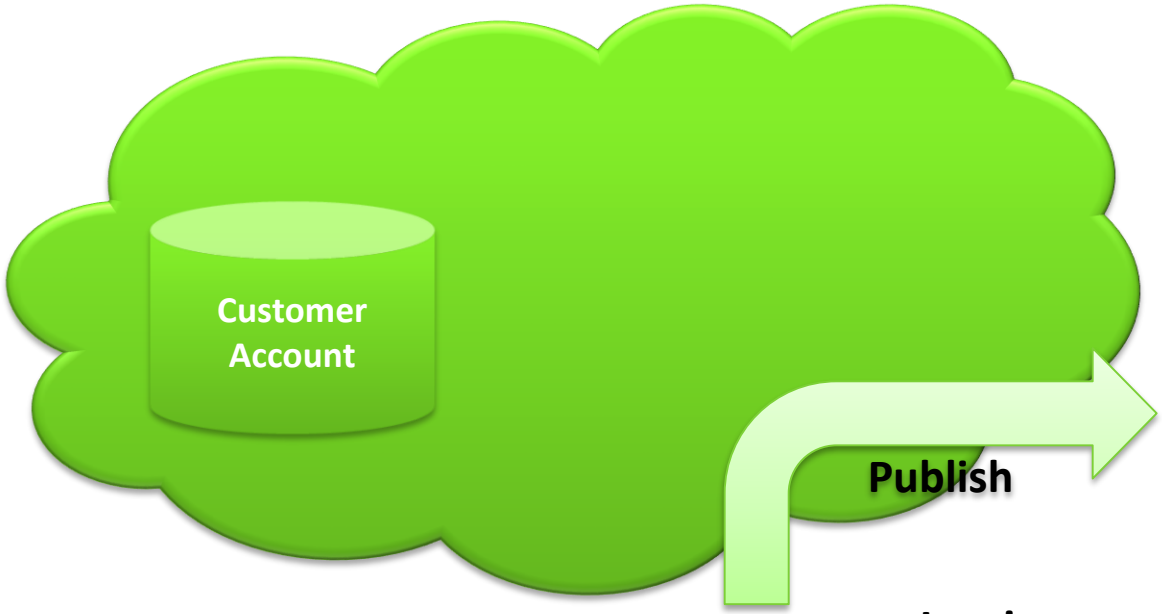
PhotoScan
By Agisoft

Smart3DCapture
By Acute3D

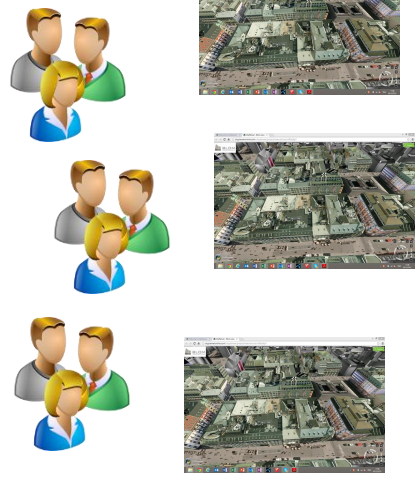
BLOM3D

Terrasolid
Software for LiDAR Processing

StreetFactory
By AirBus Defence and Space

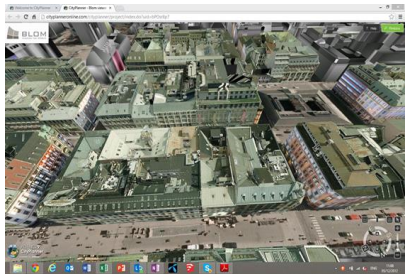


Public users



Log-in users

View
Edit
Create scenes
Share
Publish



Customer Spatial Data Base

DTM | Ortho | Buildings

CityGML

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Local data storage and hosting

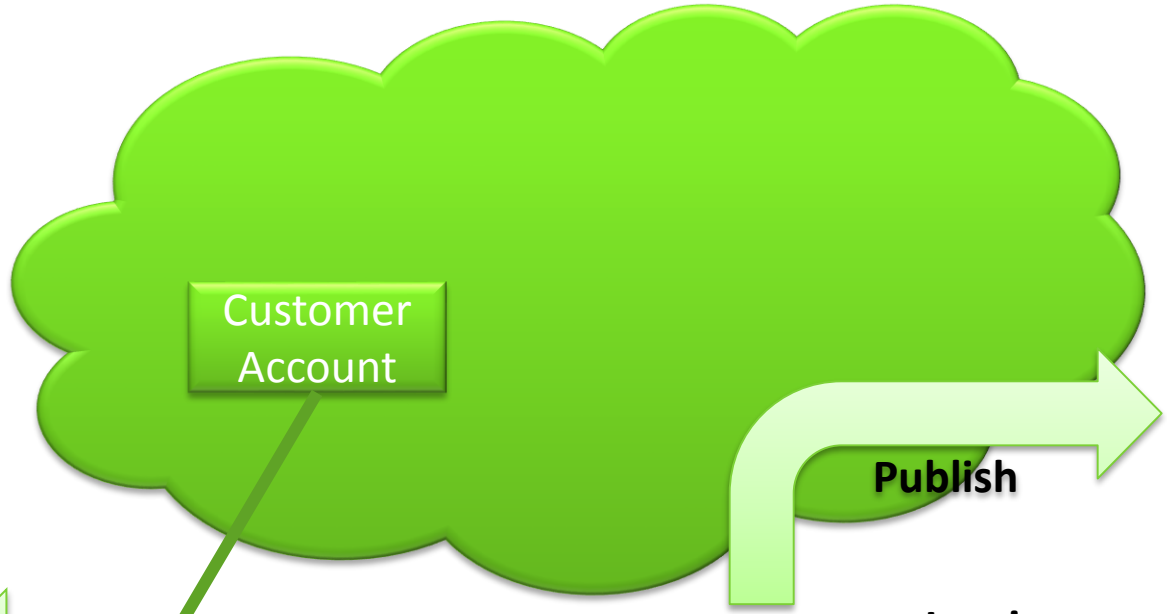
PhotoScan
By Agisoft

Smart3DCapture
By Acute3D

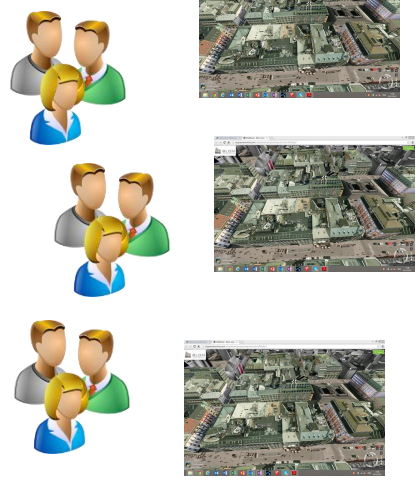
BLOM3D

Terrasolid
Software for LiDAR Processing

StreetFactory
By AirBus Defence and Space



Public users

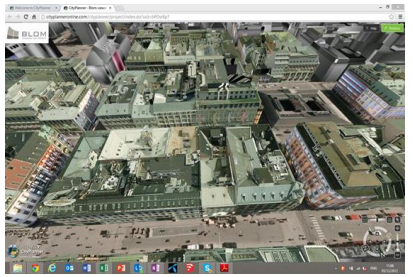


Customer Spatial Data Base

Local data storage

DTM | Ortho | Buildings

CityGML



Log-in users
View
Edit
Create scenes
Share
Publish

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Data partner model

Data Partner

Customer Data

Customer Data

Customer Data

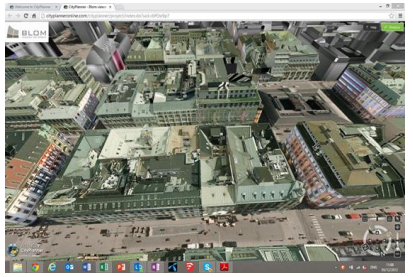
Customer Account

Publish

Public users

Admin Access

3D Data Library



Log-in users

View

Edit

Create scenes

Share

Publish

Customer

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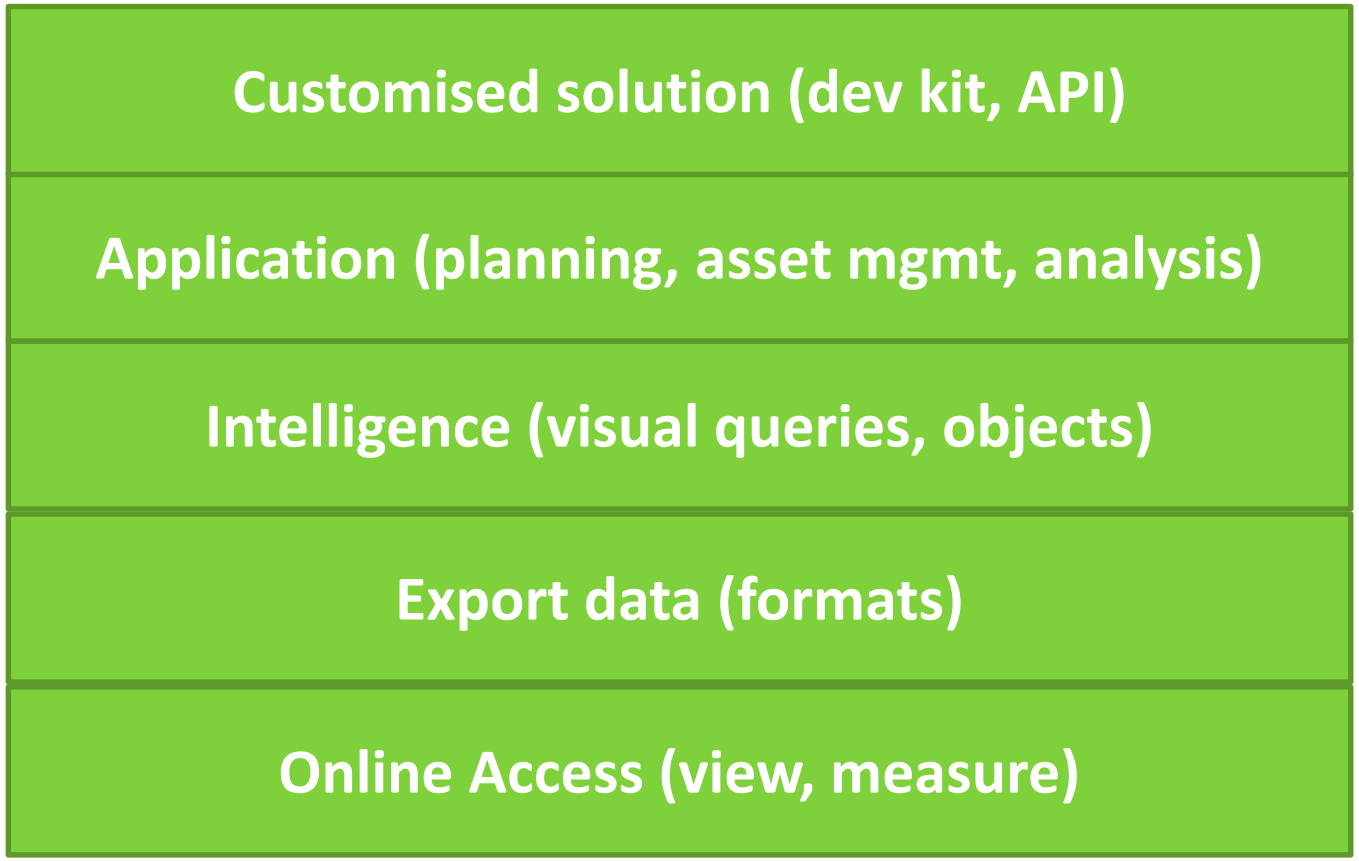
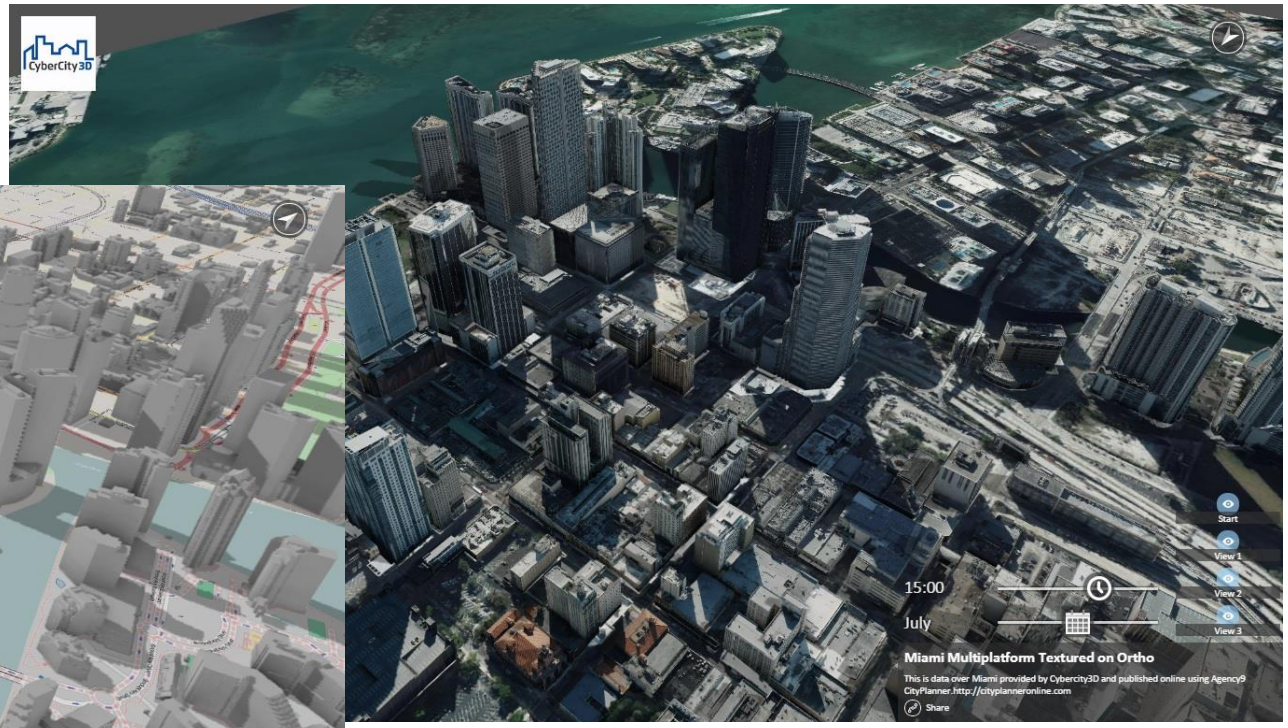
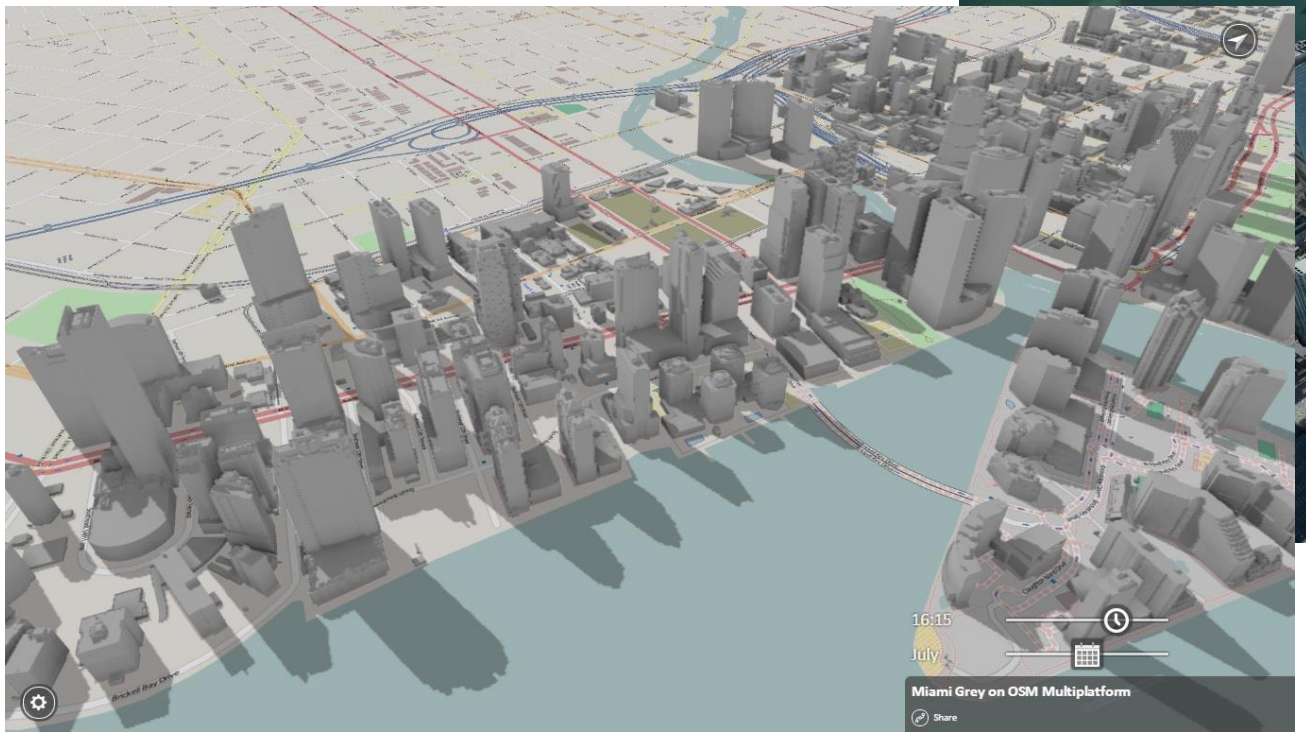
Levels of opportunities

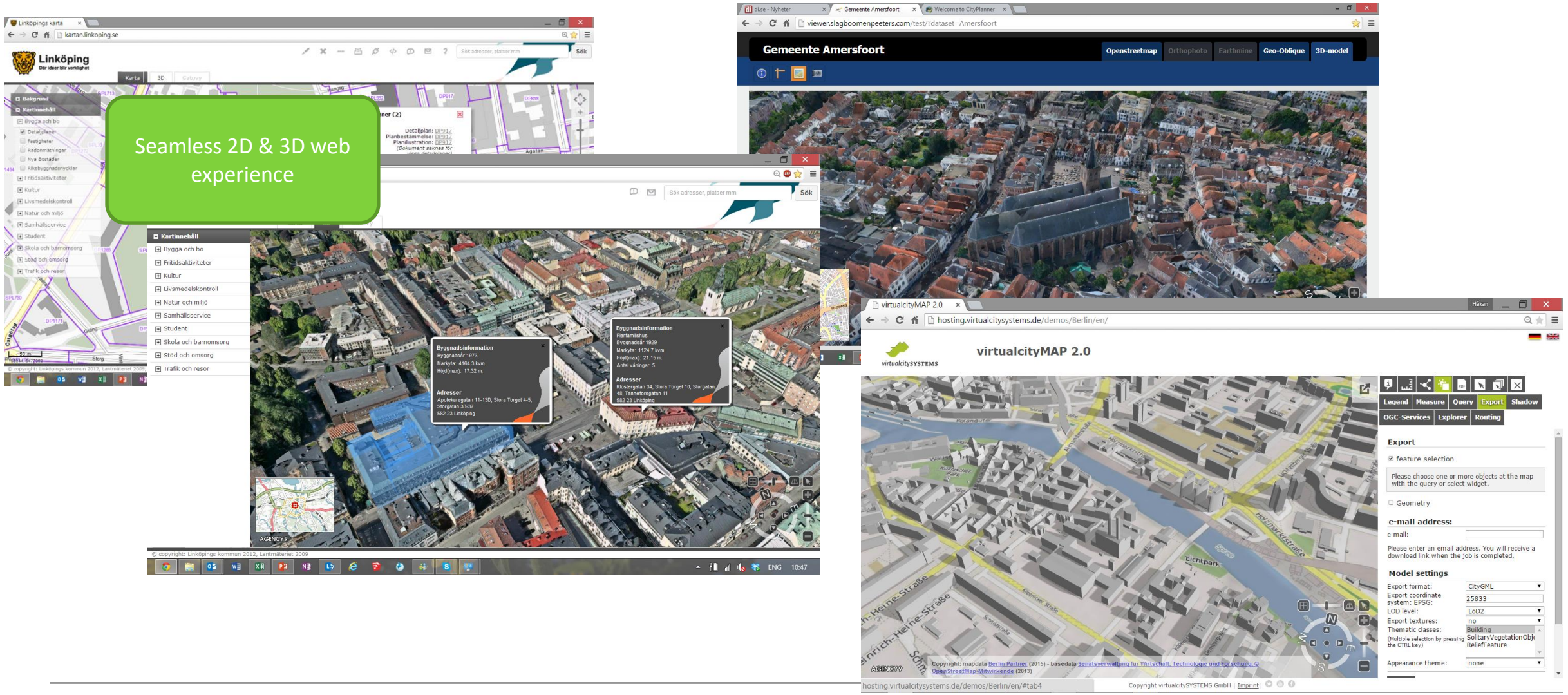


Miami streamed to web and mobile





2D/3D Web map



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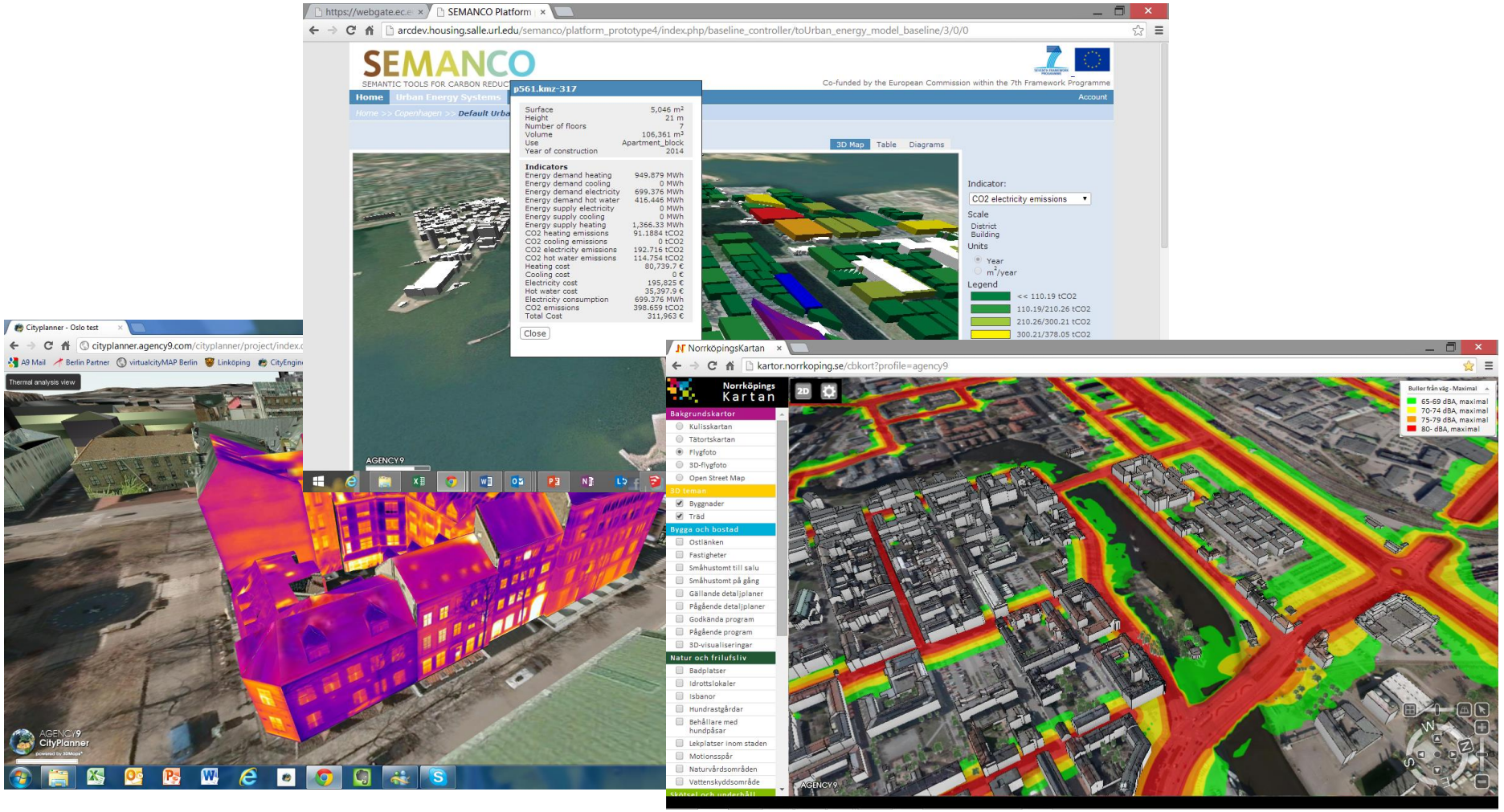
Energy and sustainability



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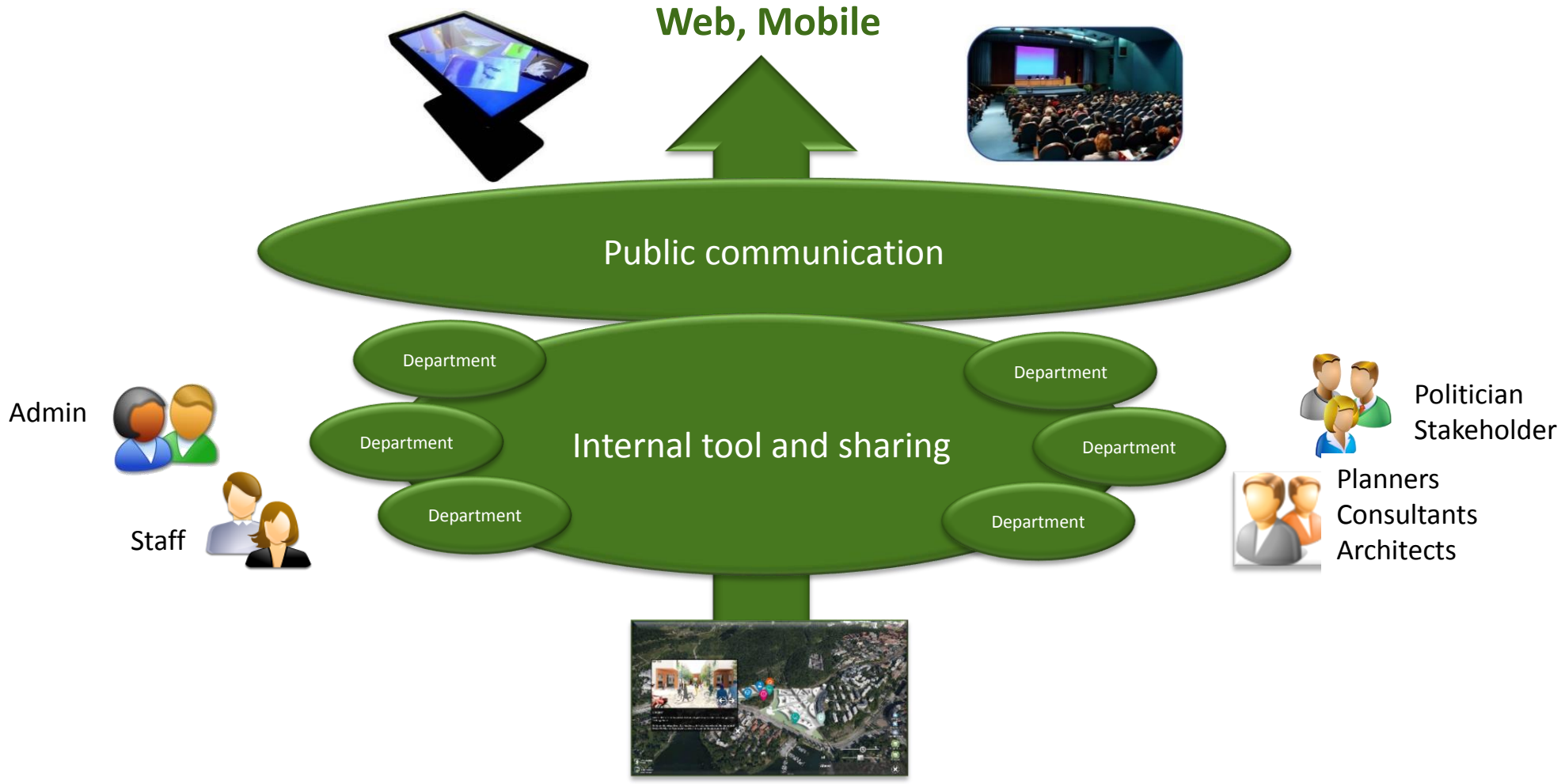
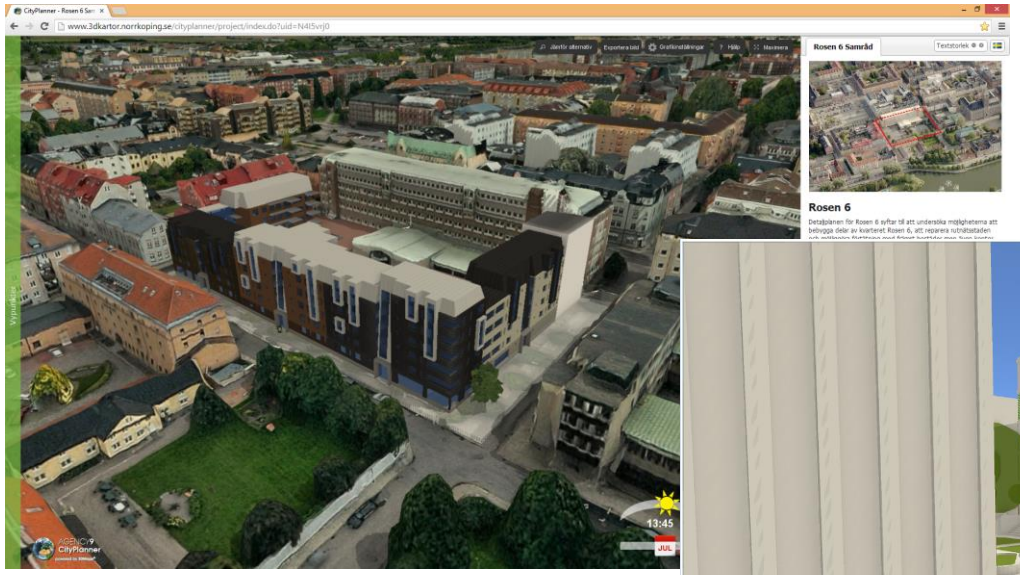
Sharing and communicating



Share projects

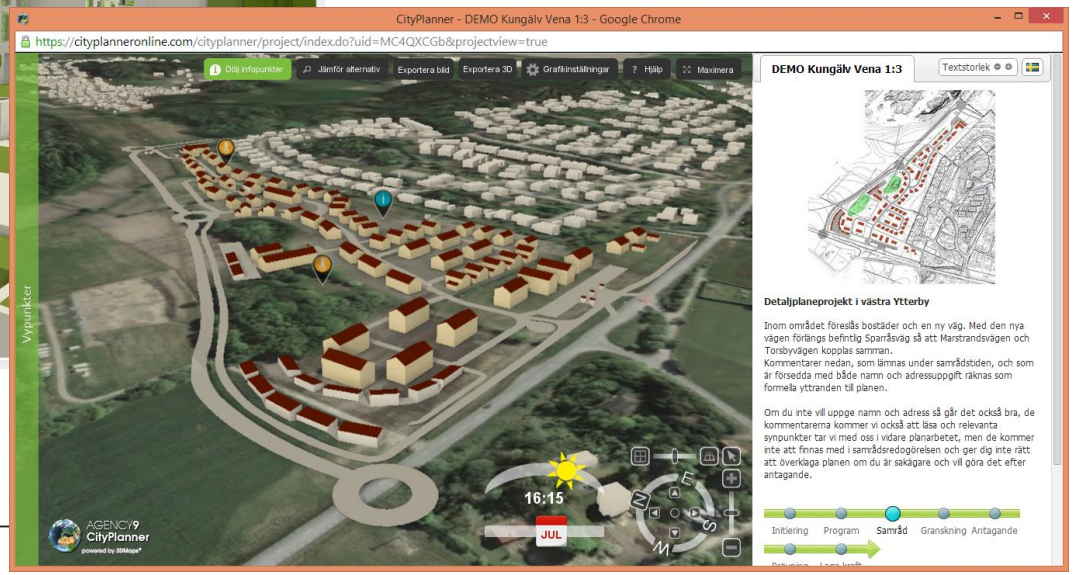
- In project teams
- With external consultants and stakeholders
- For updated view and common vision of projects

Visualization of plans



Norrköping

Silkeborg



Kungälv

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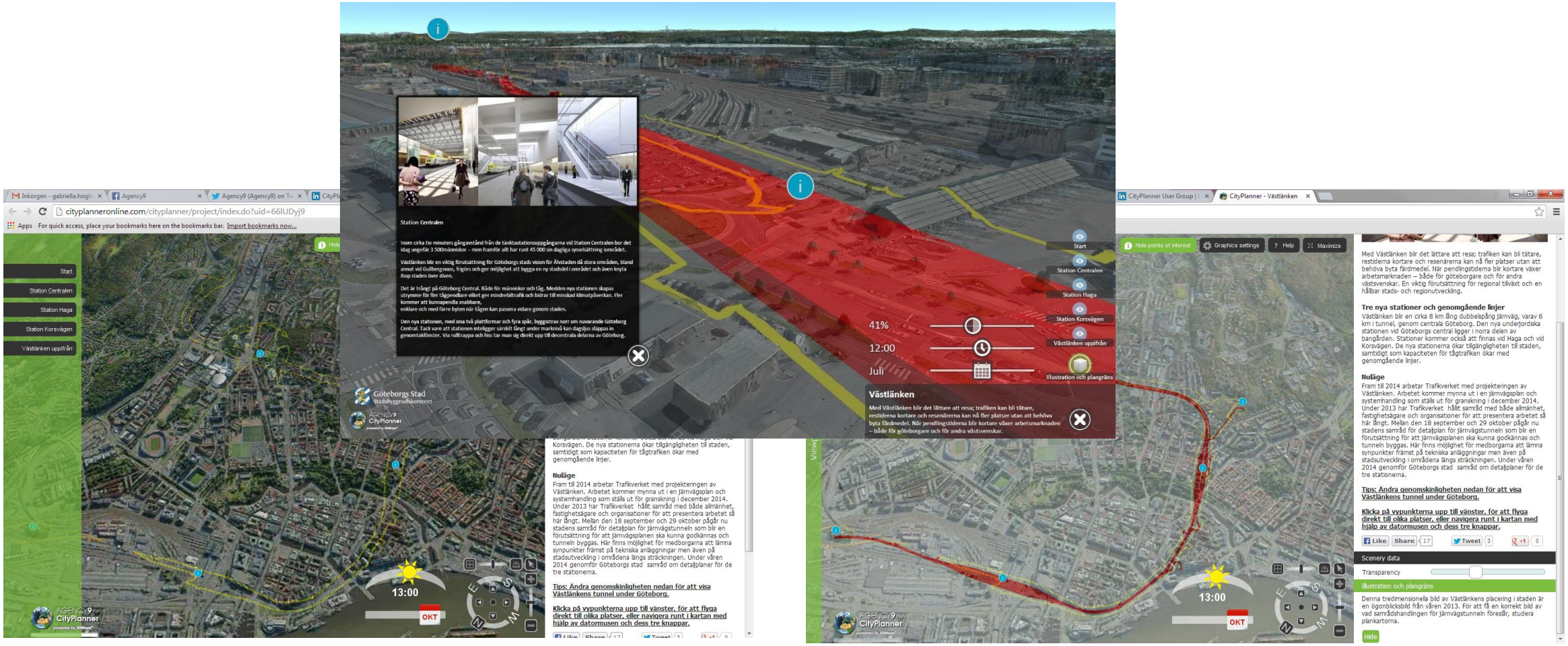
Infrastructure and tunnels



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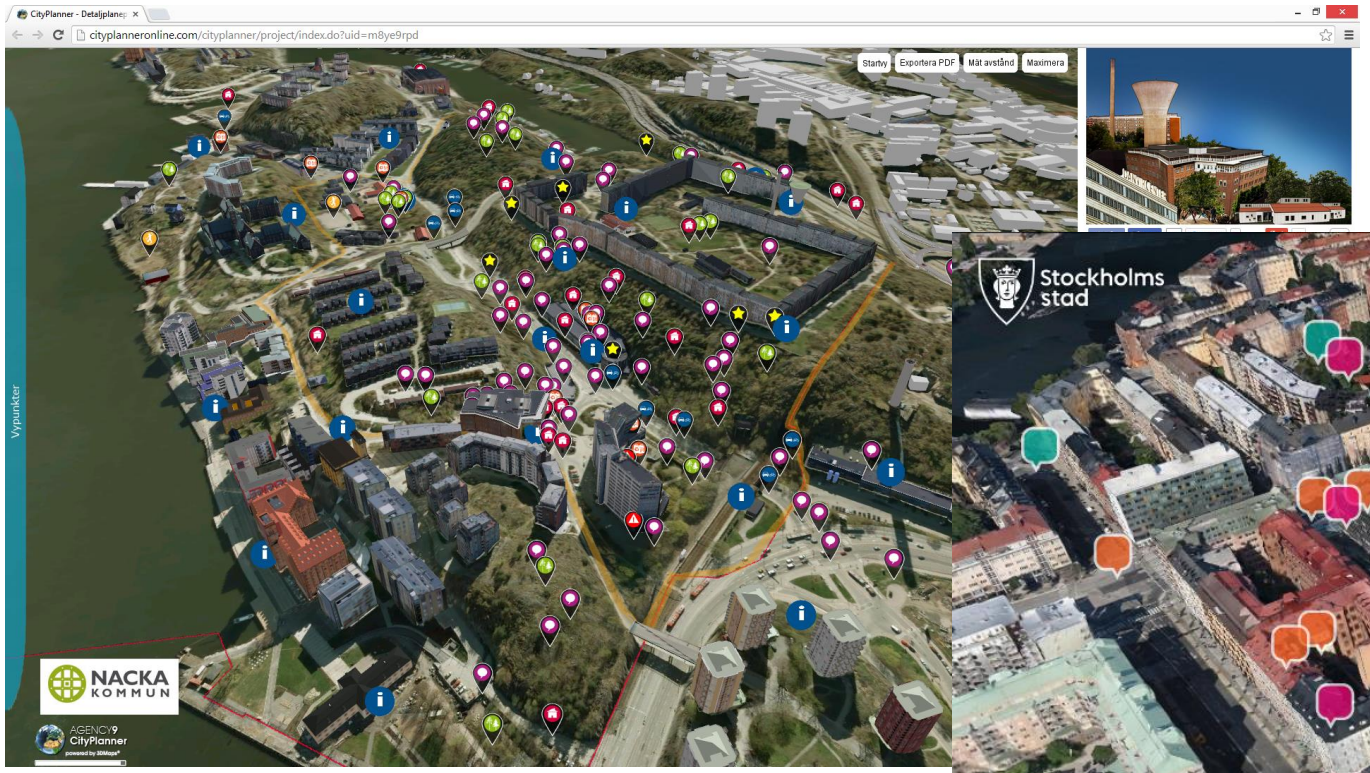
Crowdsourced planning



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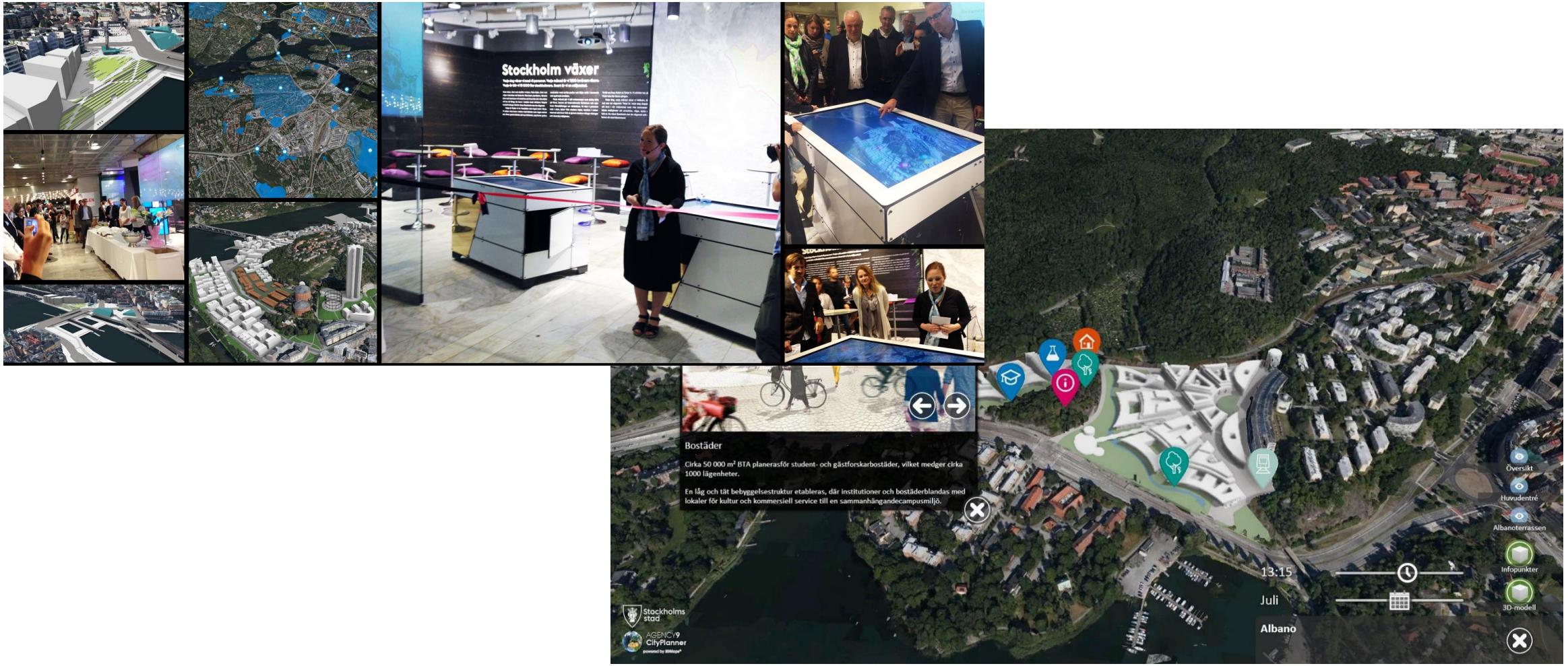
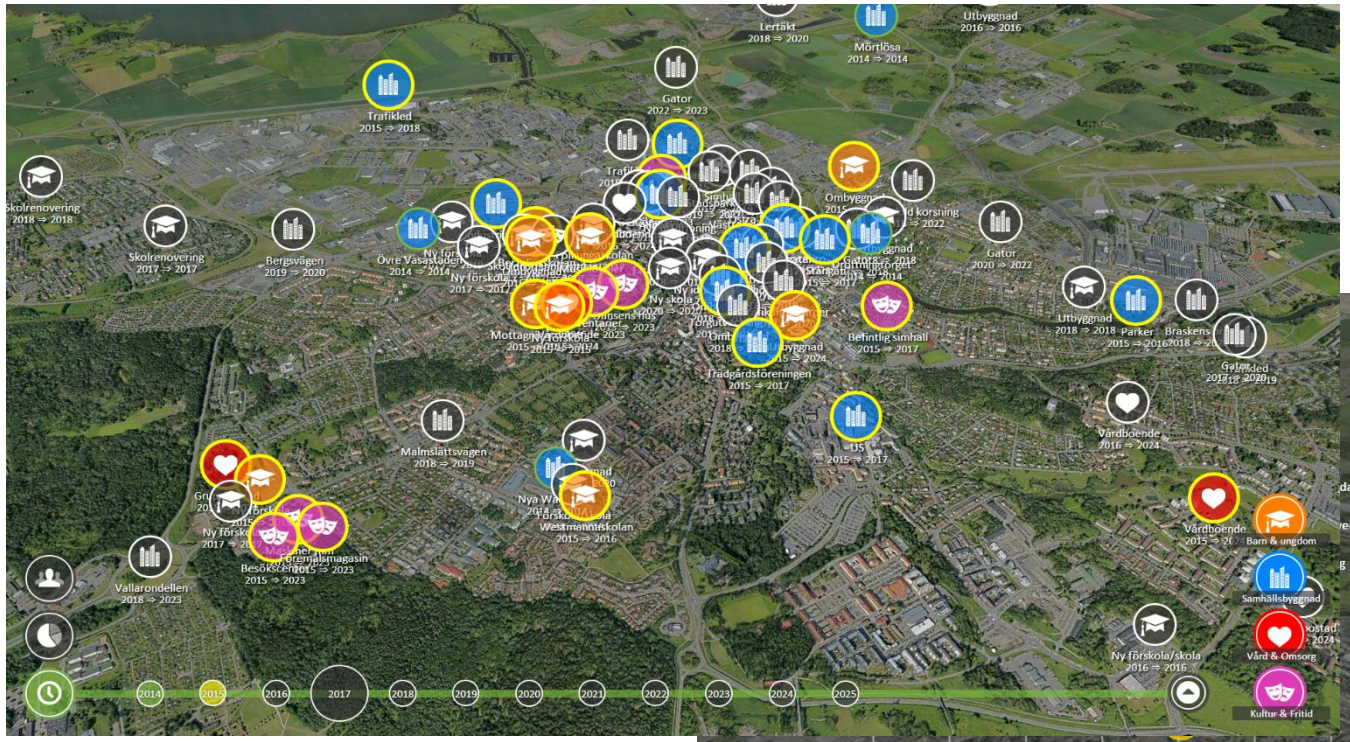
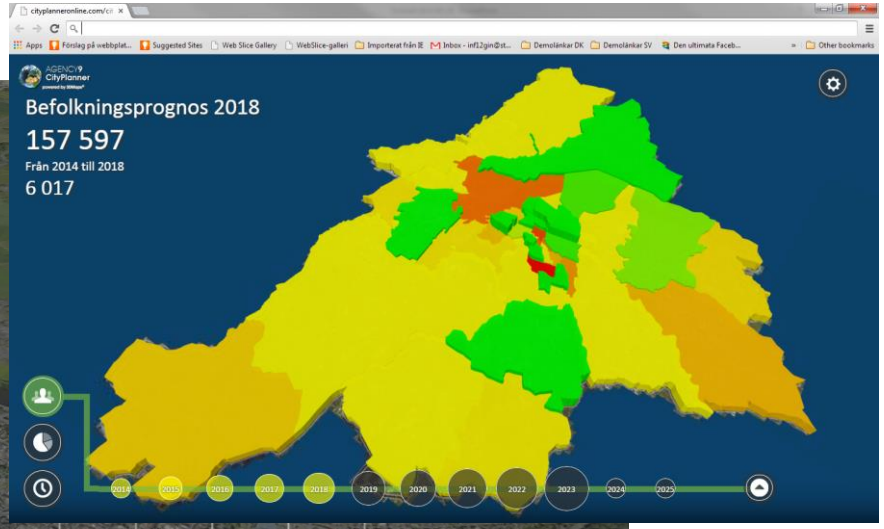
Public showroom



Decision support in 4D





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Summary

- Strong trend for online
- New service opportunities
- Production and storage challenges
- Streaming techniques

Streaming WebGL

Thank you
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19:00