



Point Cloud aspects of:

# Geomagine<sup>®</sup>

Experience- and orientation technology

**Making** other spaces  
challenge your **senses**.

**Now or Upfront.**

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# Point Cloud experiences

## Setting up Geomagine in 3D VR



### 3D Data

- Open
- Customer
- Geodan
- Real time sensor data
- Third parties



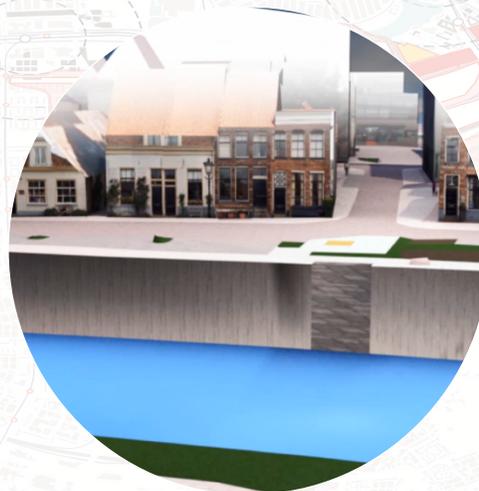
### City Engine

- Data processing / Post GIS
- Rule scripts / tiling
- Export scripts
- Integration Unity3D



### Unity3D

- Import scripts
- Realifying life / assets
- Eyes, ears, nose/taste, skin
- Interaction / collaboration
- Output modes



# Point Cloud orientation

## Three main challenges in 3D AR viewing



### Performance

- 3D
- Mobile devices
- 3 billion points
- Web
- Software
  - PDAL (process)
  - Entwine (index)
  - Greyhound (serve)
  - Potree (visualize)



### Device Orientation

- Translate device orientation to in-app camera



### Location

- GPS inaccuracy
  - Manually assisted
  - Average over last # measurements
  - Galileo (??)
- Compass calibration



# Use Cases Geomagine

Three fields of application (local governments)



## Twinning

- Perception assessment
- Exploration/education
- City Marketing



## Sharing a future

- Civic engagement
- Living future scenarios
- Model based simulation



## Operations

- Legal
- Infra
- Maintenance

