Interreg - IPA CBC
Hungary - Serbia

URBAN-PREX

HUSRB/1602/11/0097

01.11.2017 – 31.10.2019.

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Faculty of Technical Sciences
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Representation of urban environment by using digital technologies in urban areas

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Terrain topography

- Relief
- Height
- Slope

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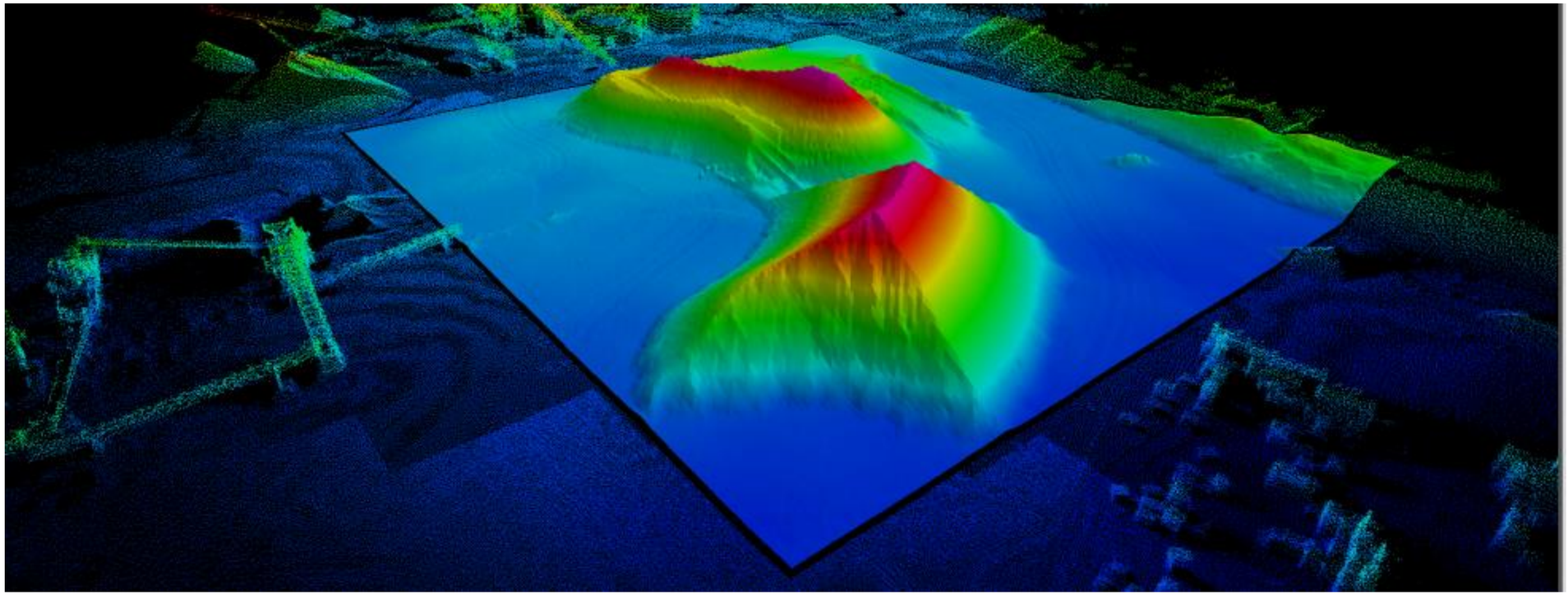
Digital model of terrain



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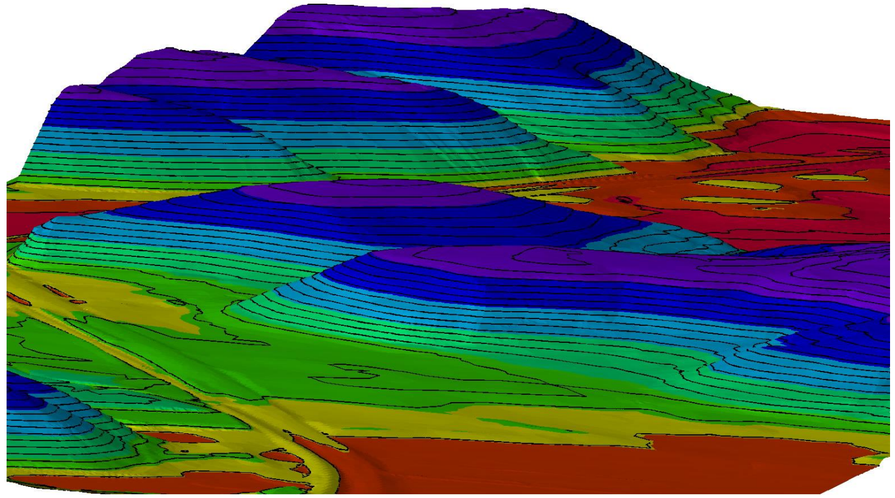

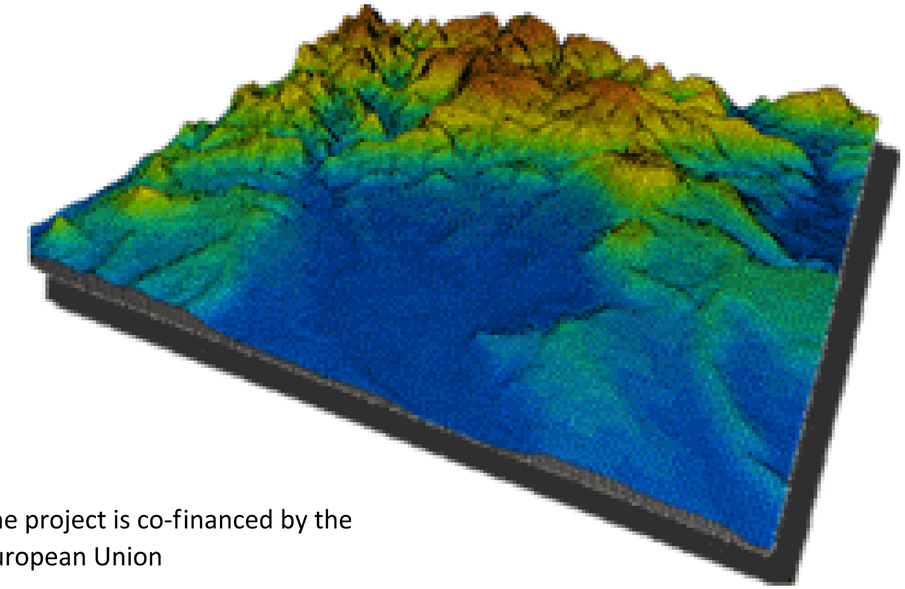

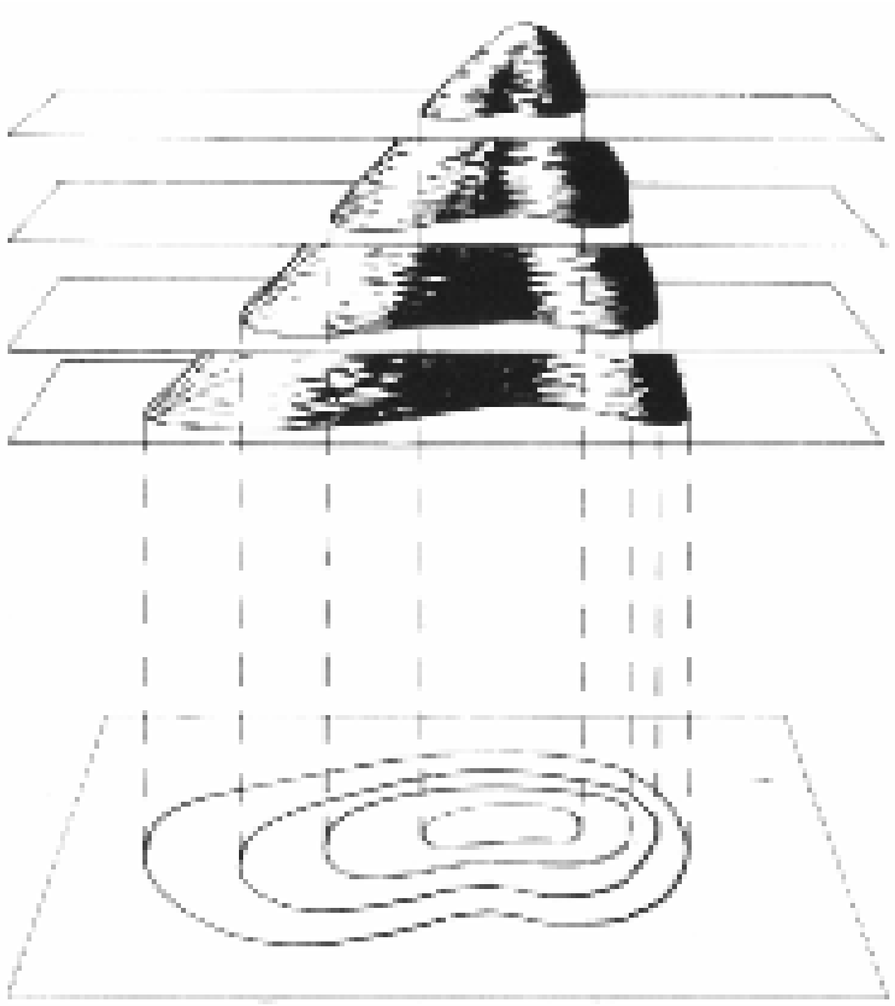

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Terrain

↓

Urban flood: negative consequences

We have to take into account:

- topographical relief
- location and position of populated areas

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MAIN CROSSROADS

Futoška street

Buolevard of Evrope

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OVERPASS

Partizanska street

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EMBANKMENT

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Danube (Germany)

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Visualisation of urban floods

↓

Representation of urban environment

Capturing technique

Photogrammetry

Interactive technologies

Allow interactive analysis, simulations and representation of urban 3D model

Virtual reality (VR)
Augmented reality (AR)

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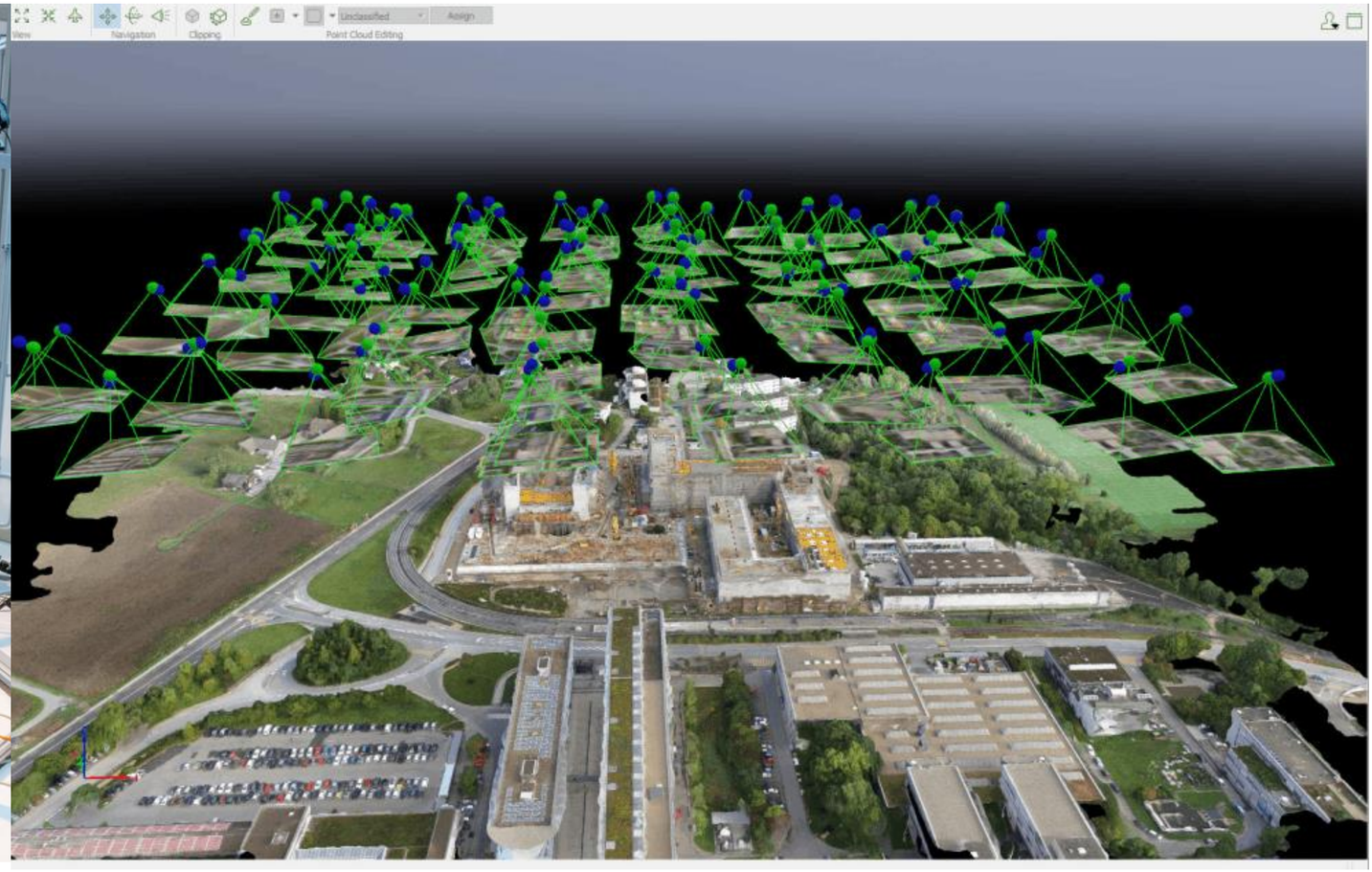
Photogrammetry



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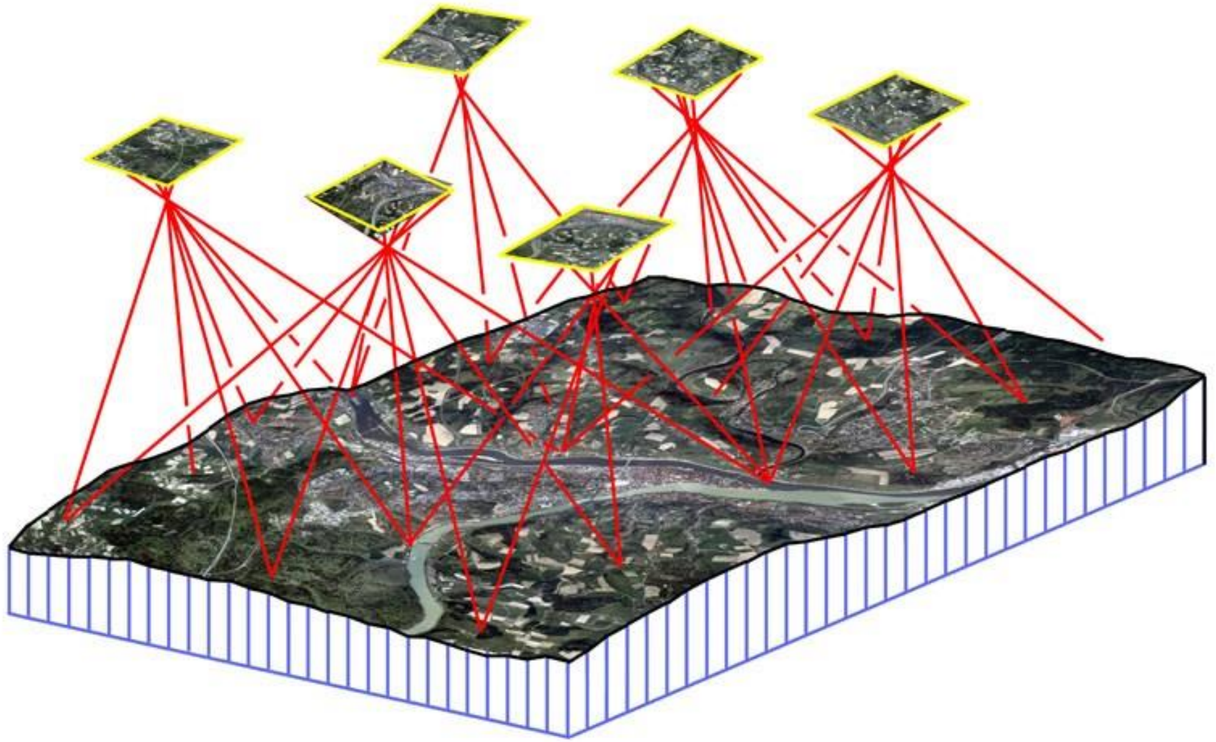

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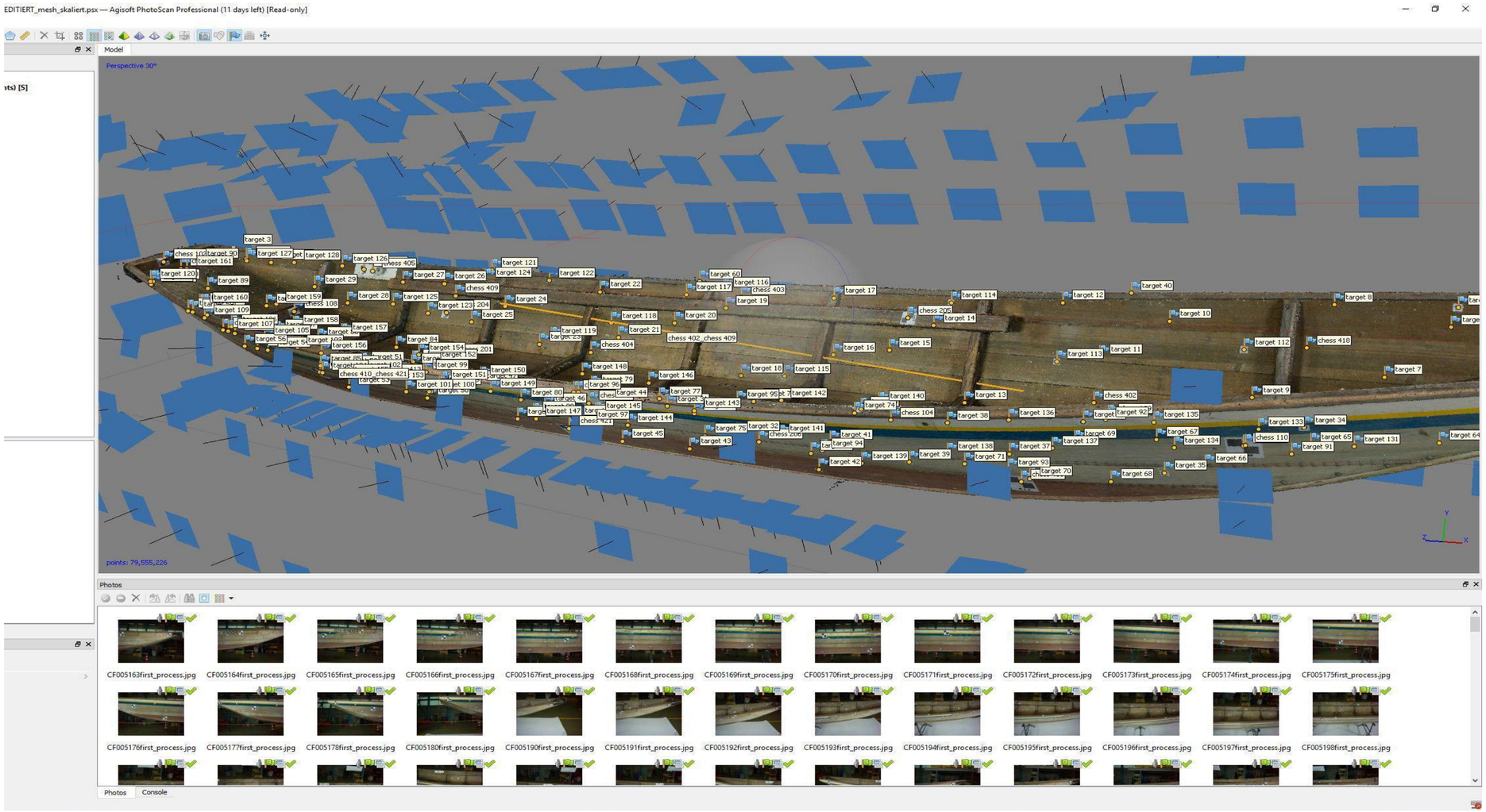

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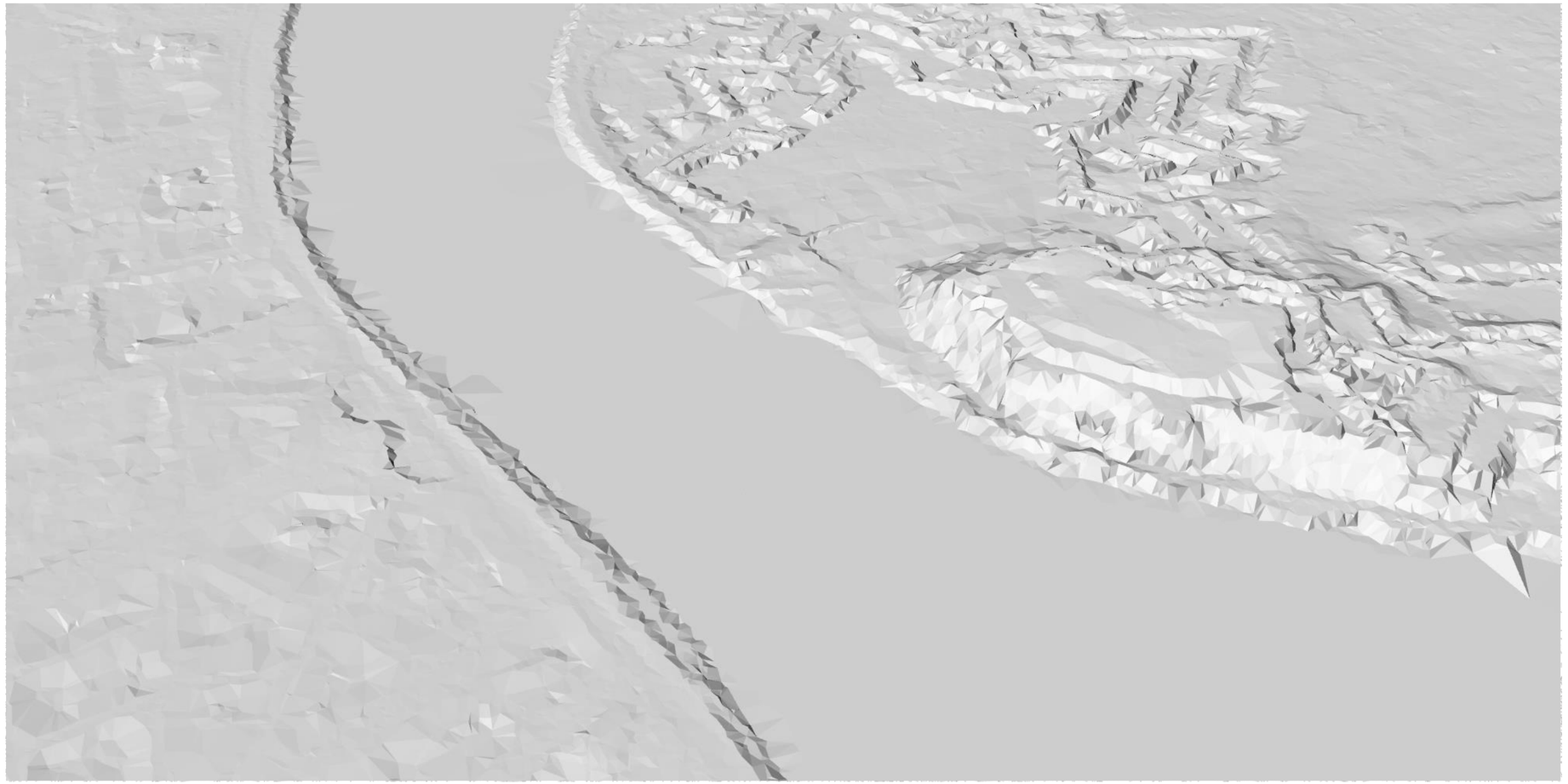
Petrovaradin Fortress



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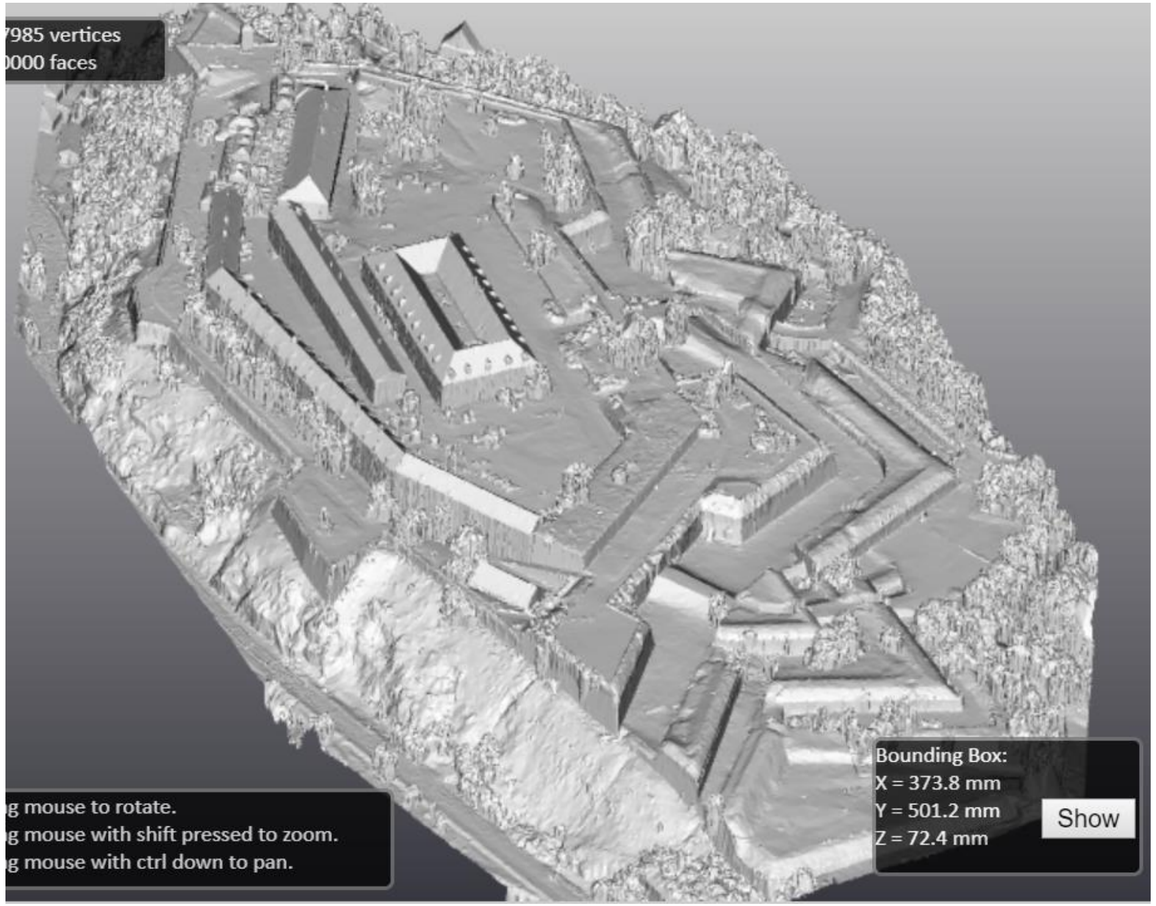
Number of triangles: 25000000. Mesh spatial resolution: 10cm.



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Virtual reality (VR)

Technology which allows visualisation of the real space with a computer generated 3d model

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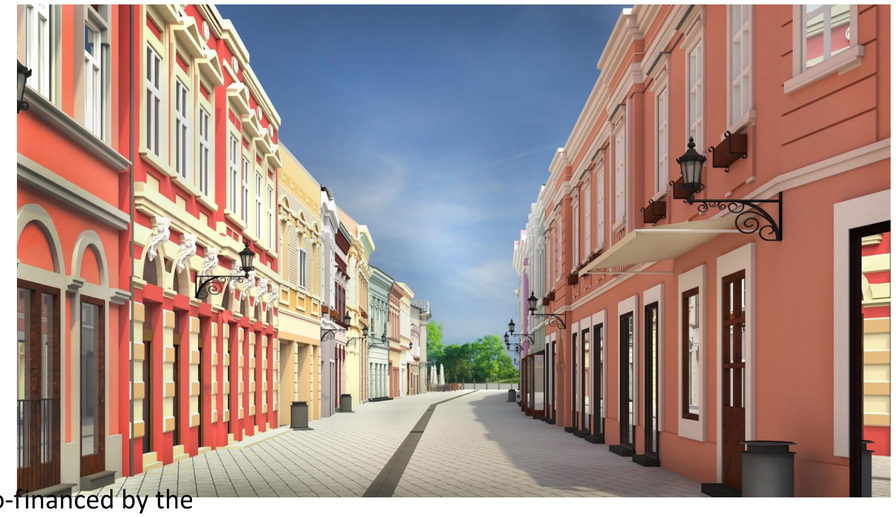
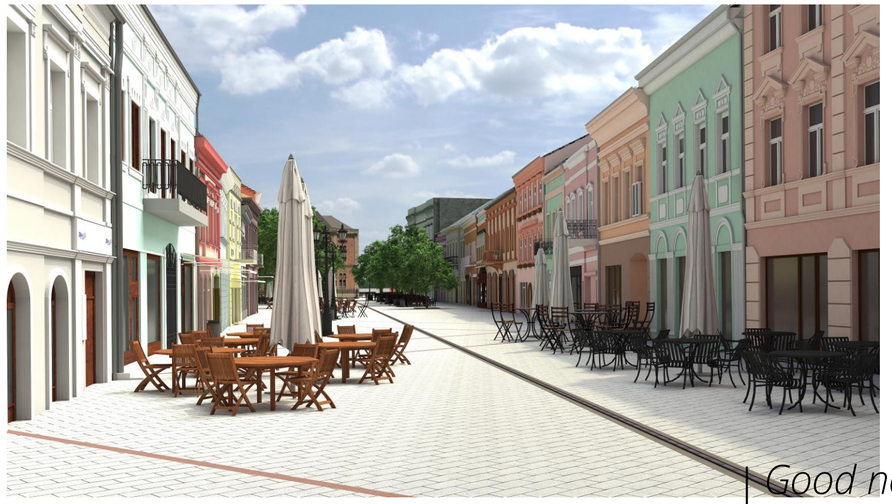
Physical 3D models of urban areas

Virtual 3D models of urban areas





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Equipment

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Augmented reality (AR)

Technology which allows complementing the real image with a computer generated image.

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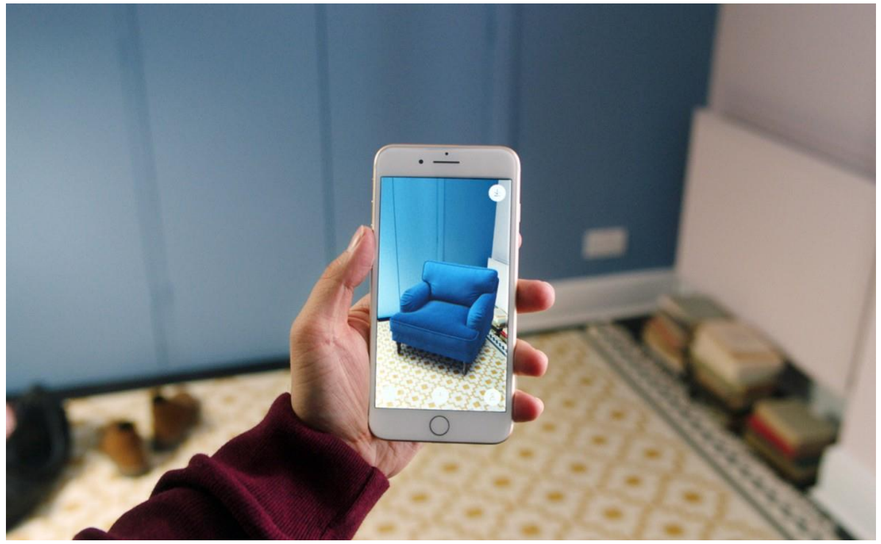

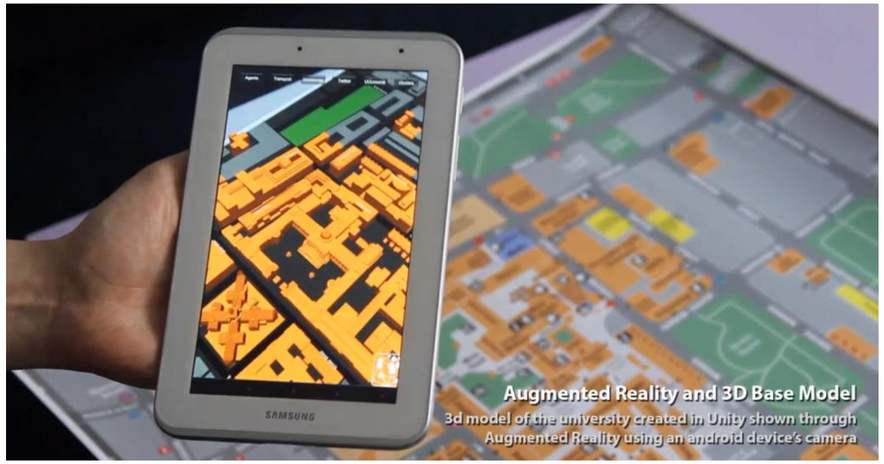

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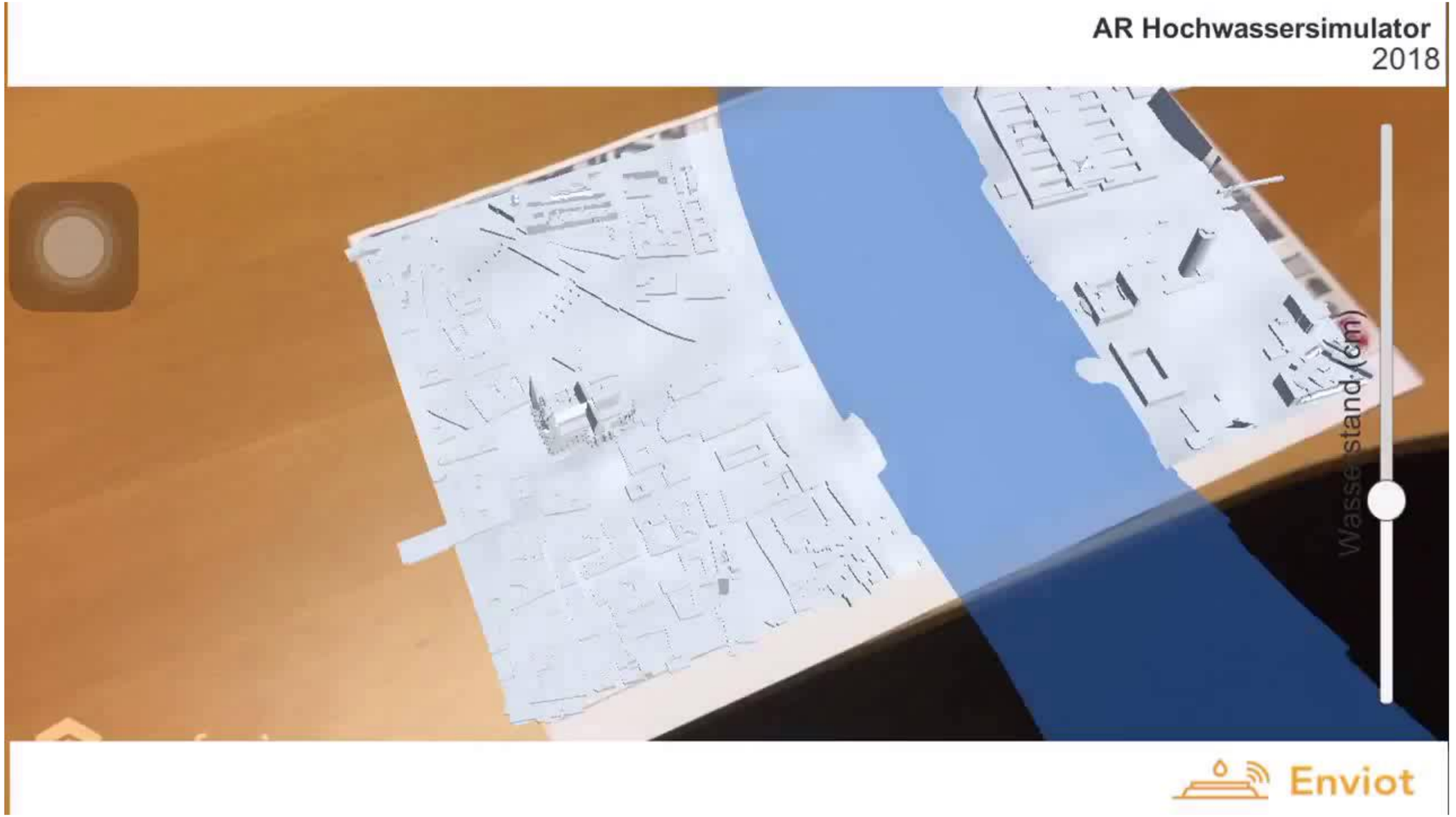
Static images

Dynamic simulations



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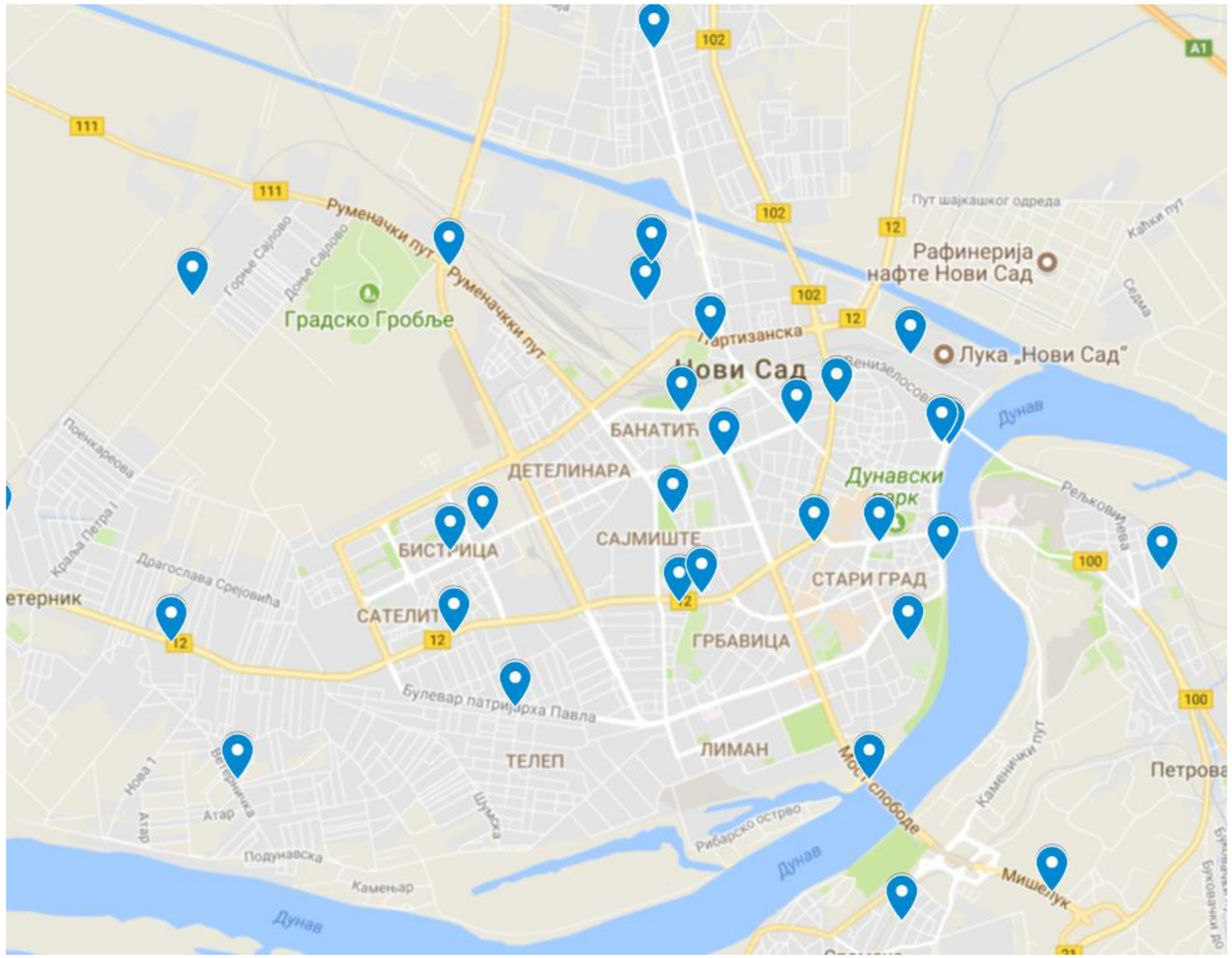
Novi Sad - critical locations



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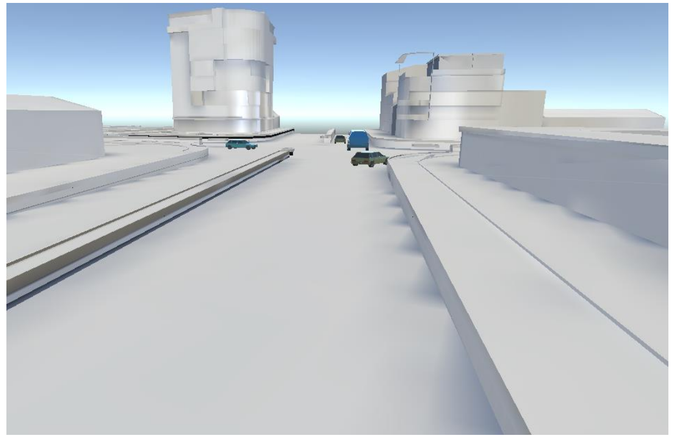
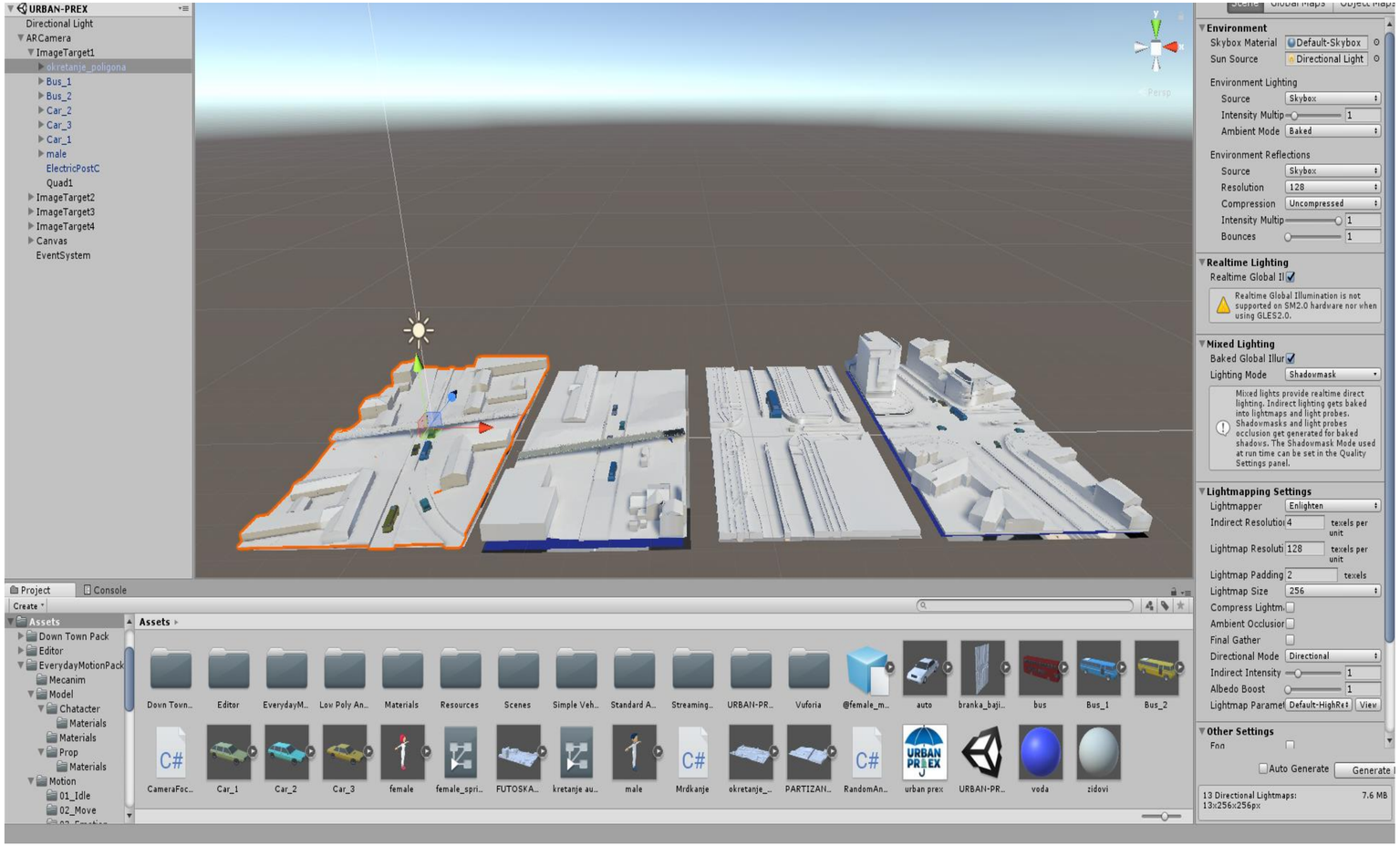
Digital 3D models





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Scale models

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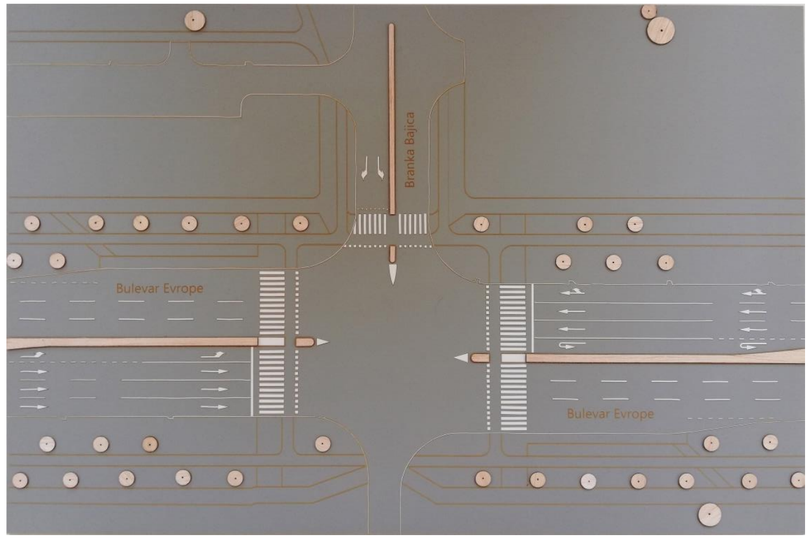

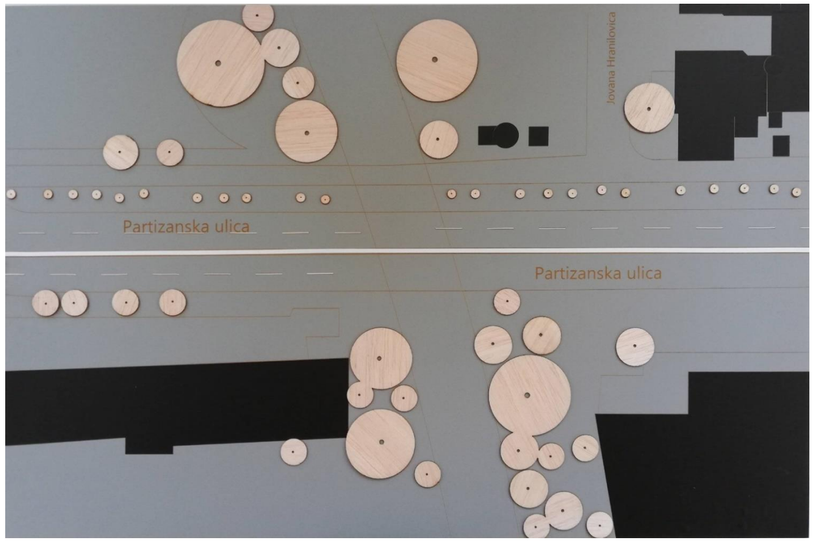

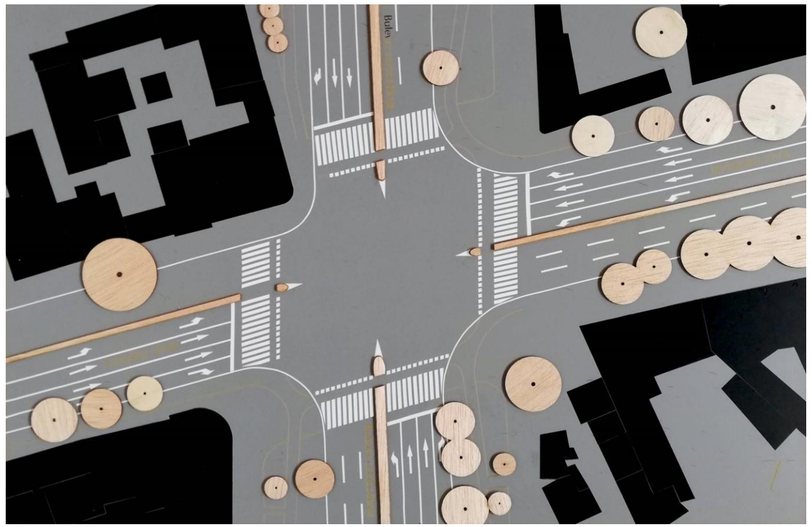

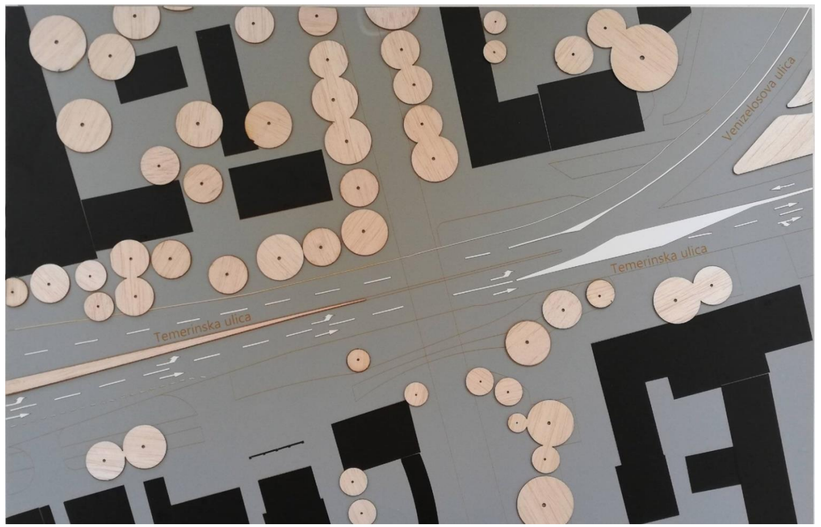

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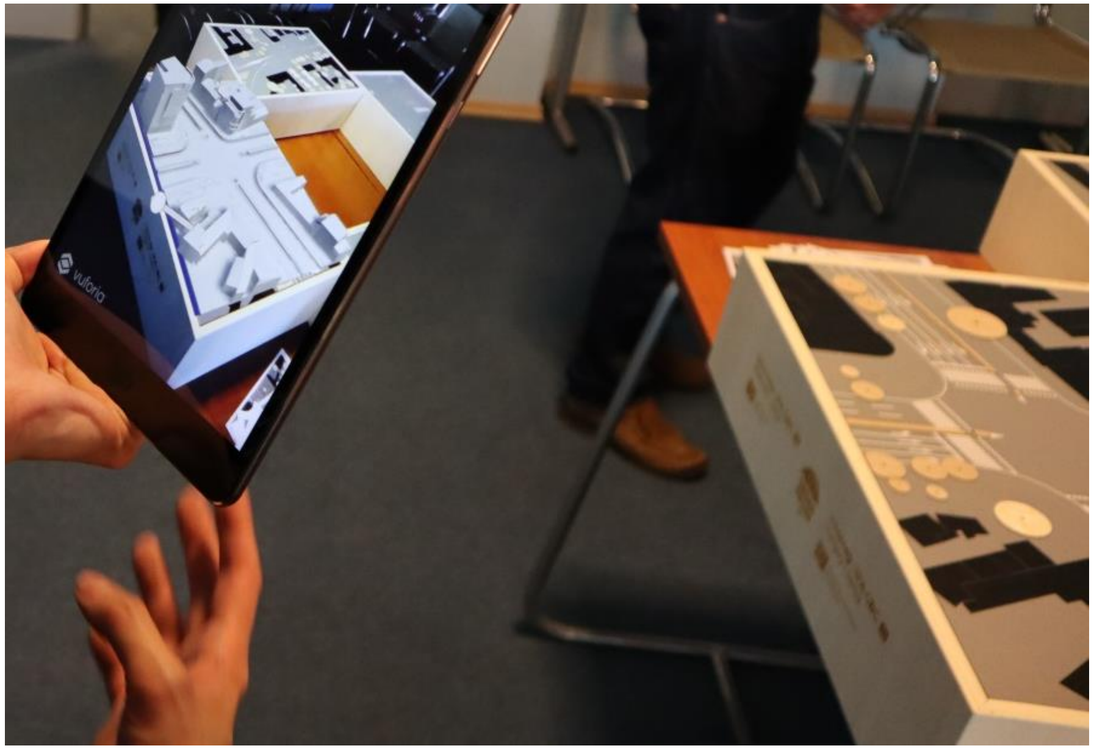
Digital 3D models + Scale models = Visualisation of urban floods (AR technology)



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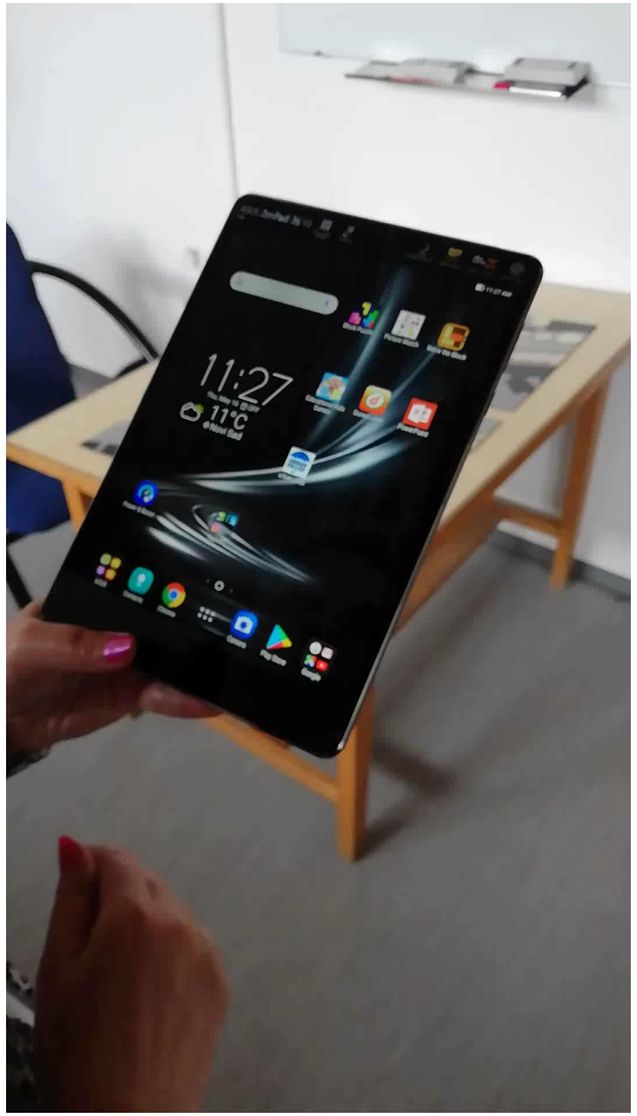

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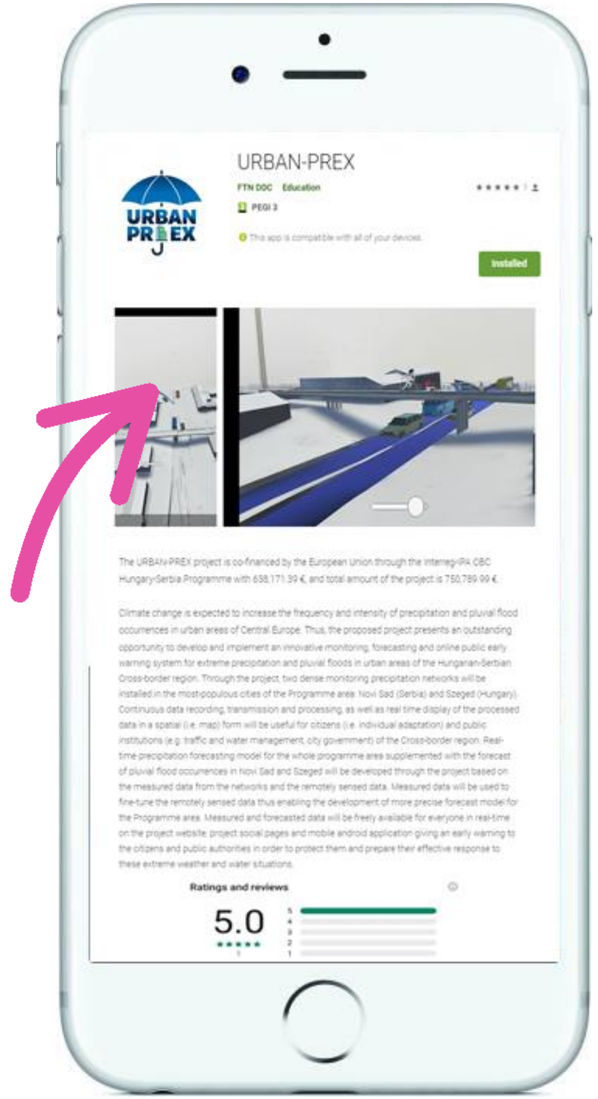
Applcation for mobile phone (Android)

Google Play Store

URBAN-PREX flood visualisation



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Thank you for your attention!

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