

Riga, 2018-09-13

BIM and Beyond Baltic Tour 2018

Reality Models for Architecture



Dr. Arūnas Urbšys
Projects Development Director, UAB „IN RE“



Apartment building at Saltoniškių street 44, Vilnius. Project title „Žvėryno vakarai“

UAB „JP Architektūra“

UAB „IN RE“

ŽVĖRYNO
VAKARAI



BIM in virtual reality

- The Real Estate Developer requested to integrate the 3D models of building and site into reality model, created using contemporary photogrammetry technology
- The reality model covered ~350 ha in Vilnius central part, and allowed to check the architectural design concept, validate the project with neighbouring residents and with regulating institutions
- Integrated reality and design model serves for marketing purposes – the interested person can walk through apartments, look through windows, fly around the site



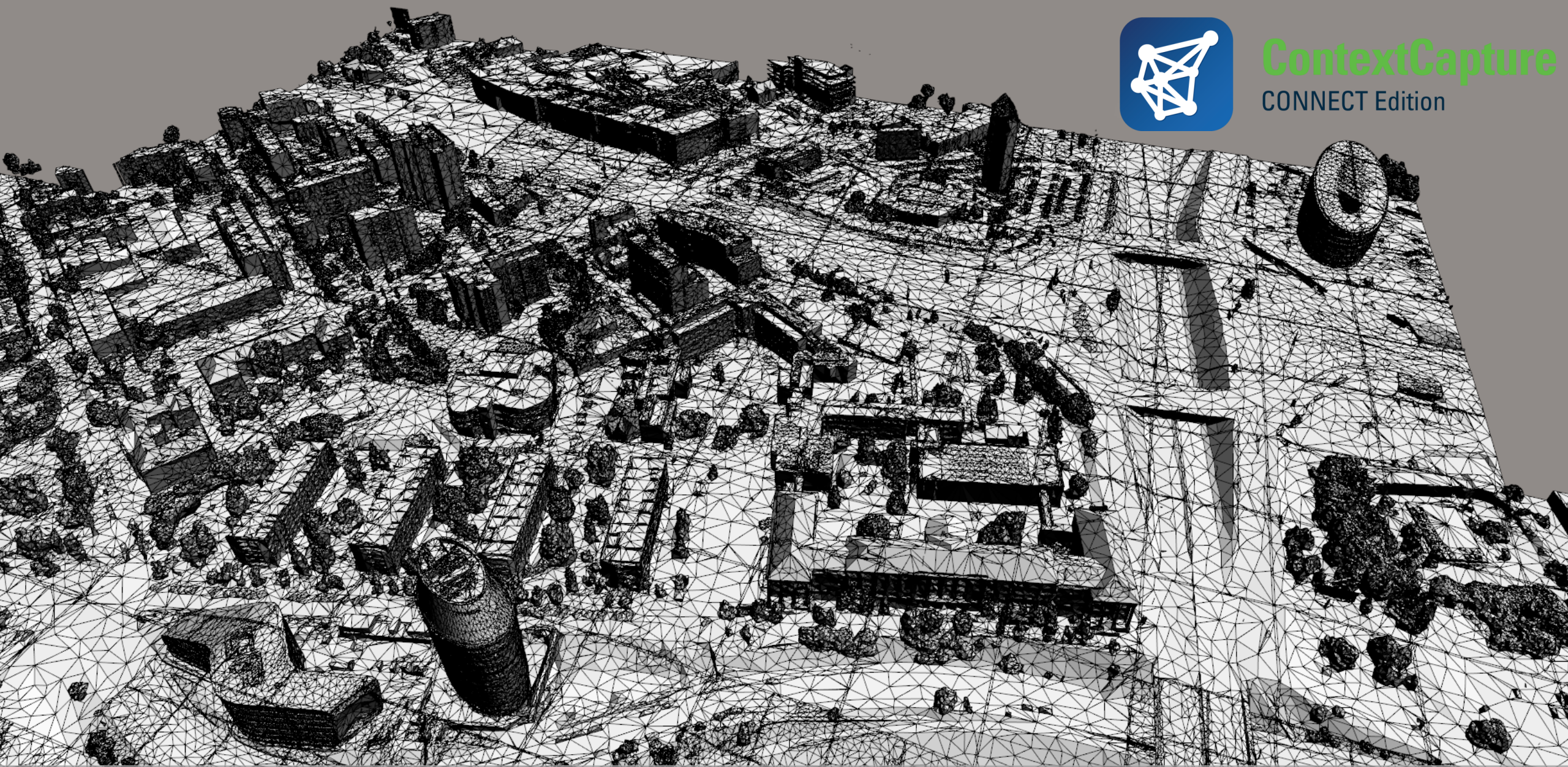
ContextCapture
CONNECT Edition

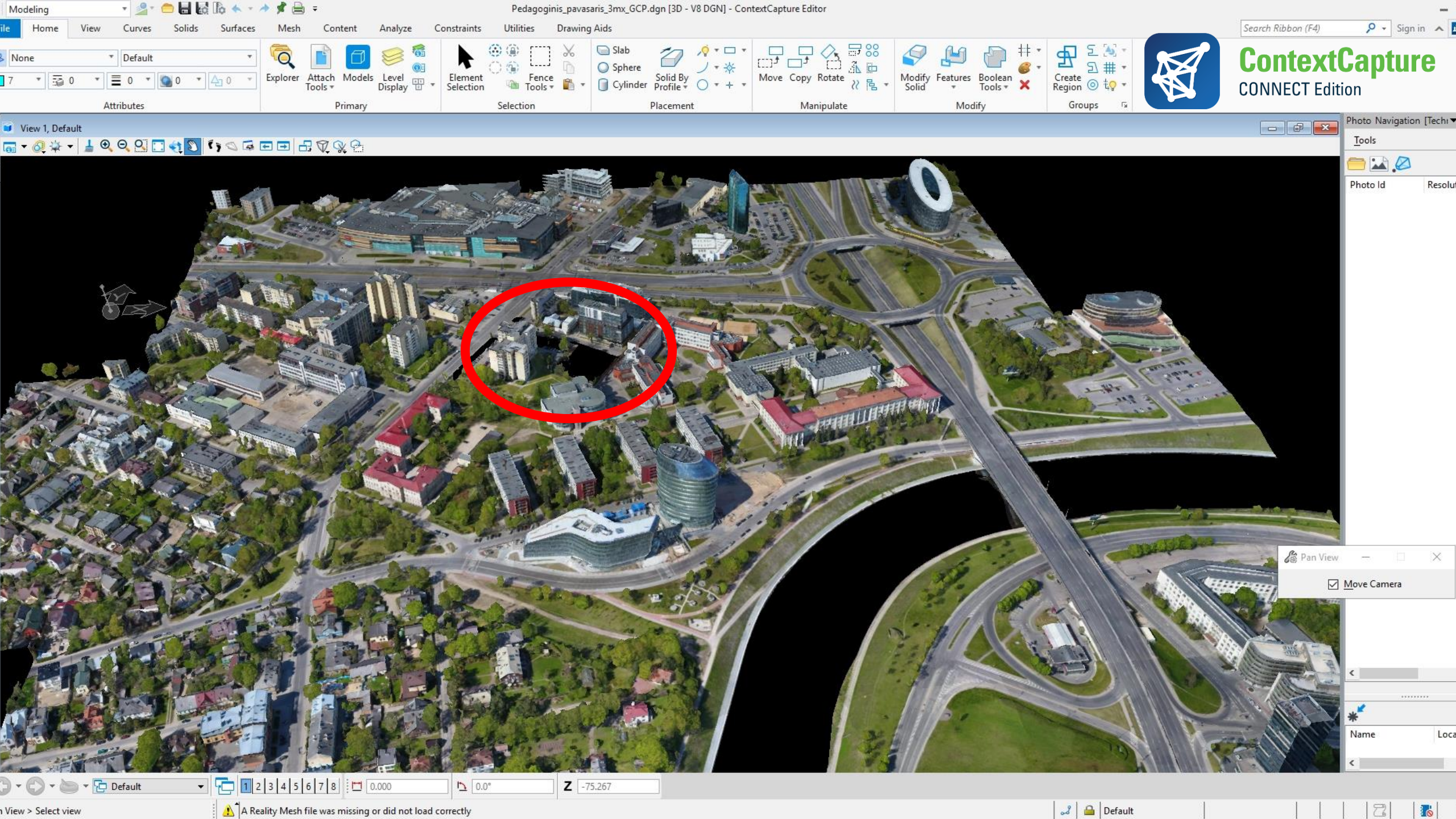


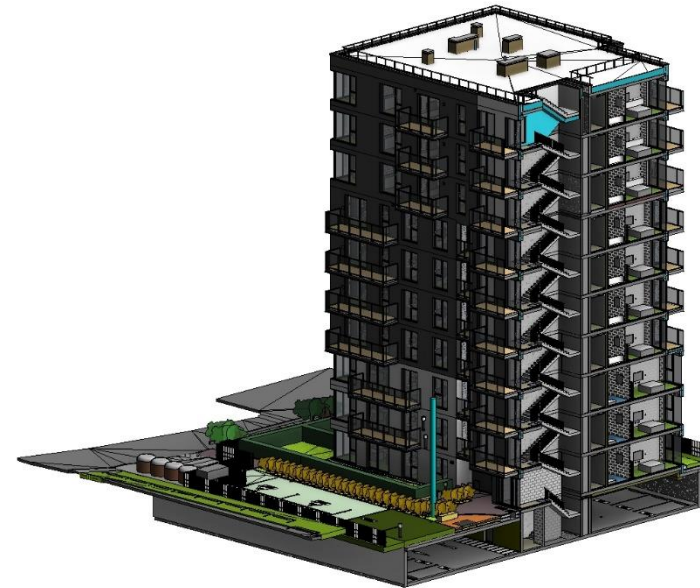


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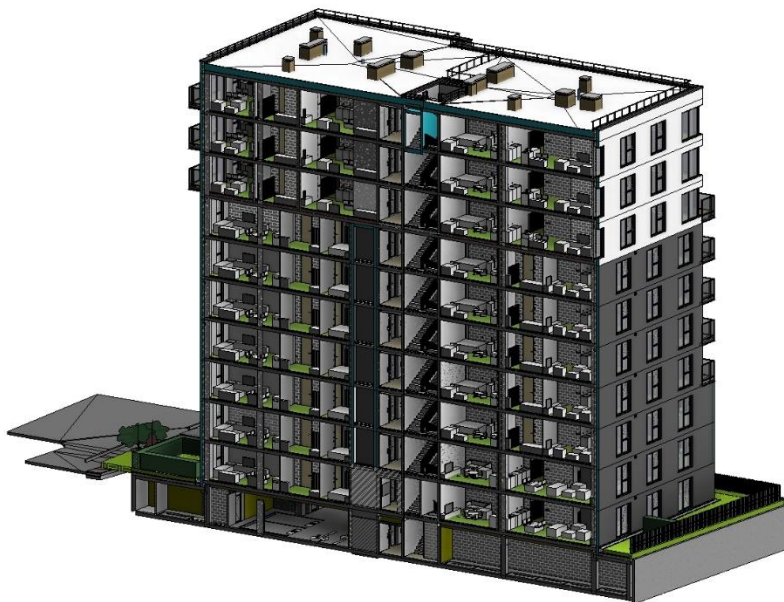
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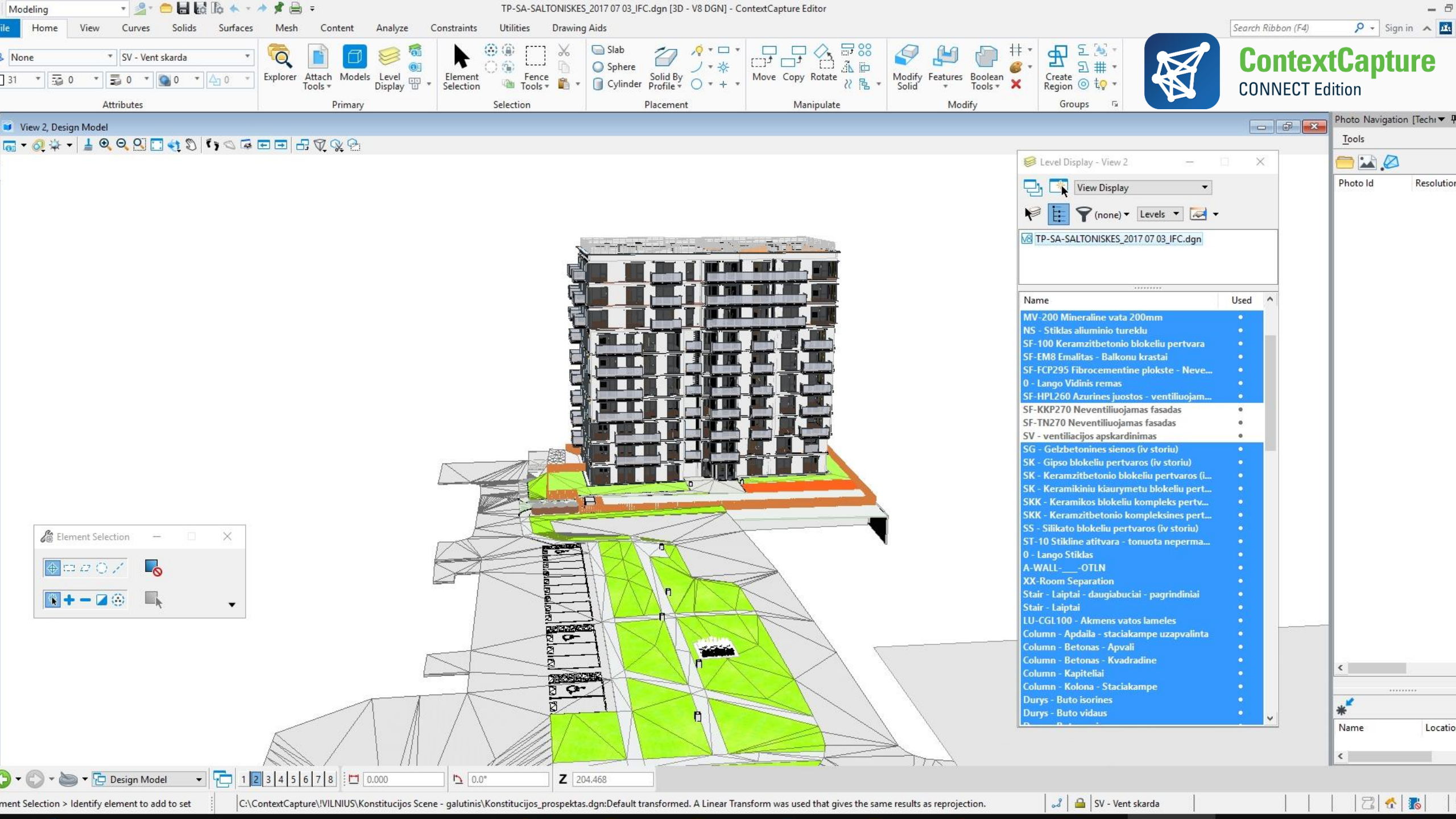




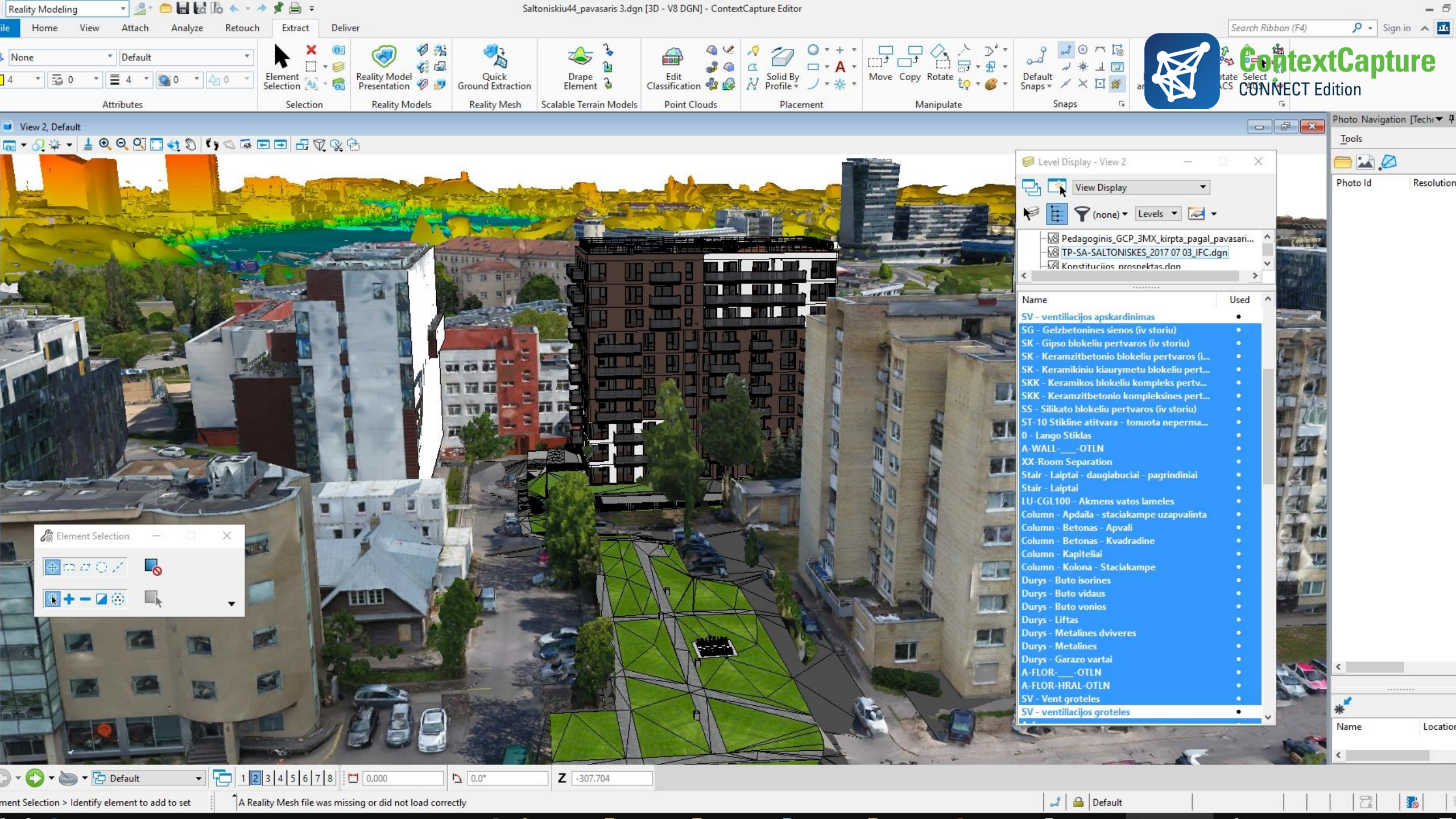
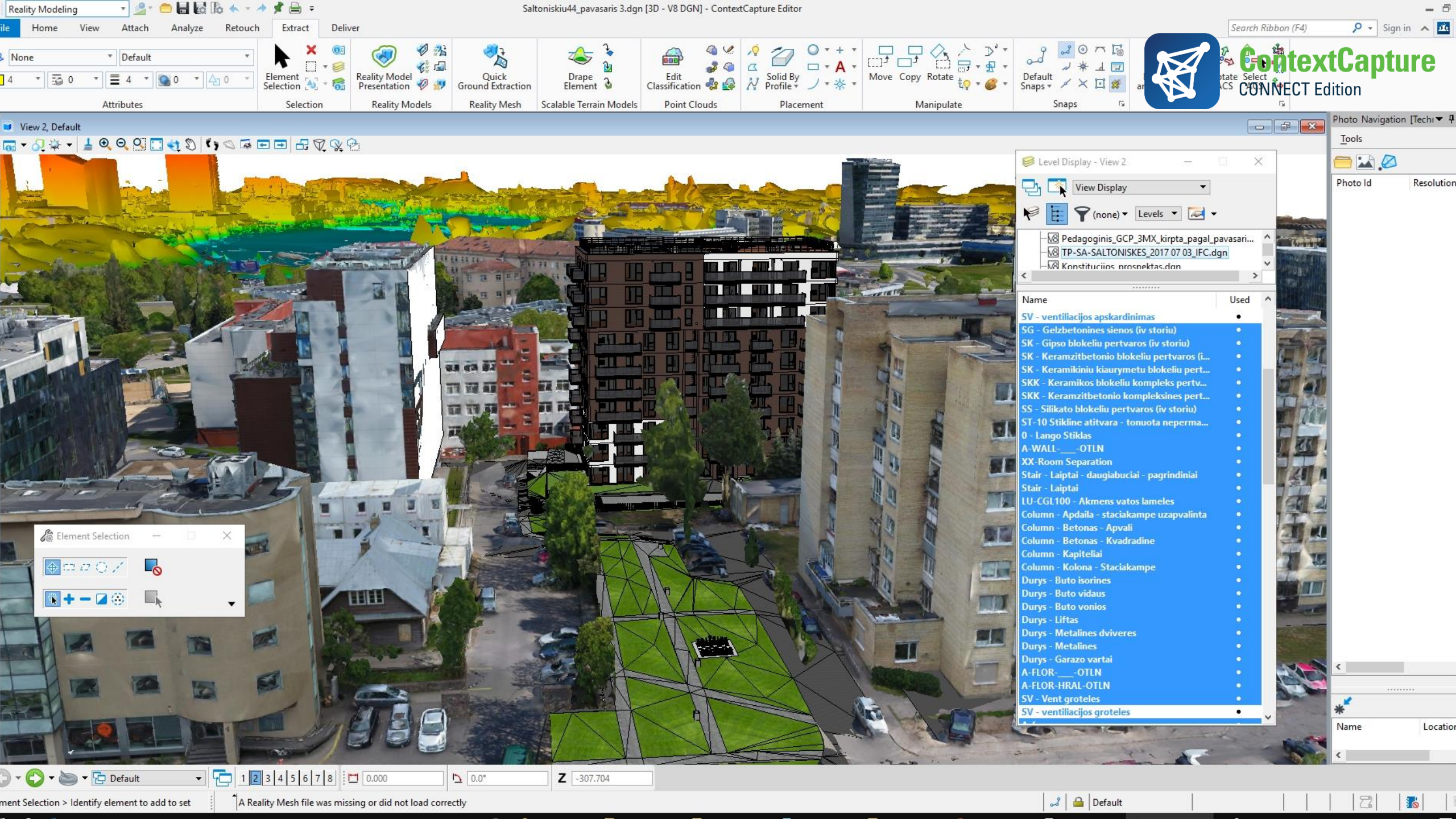


buildingSMART.





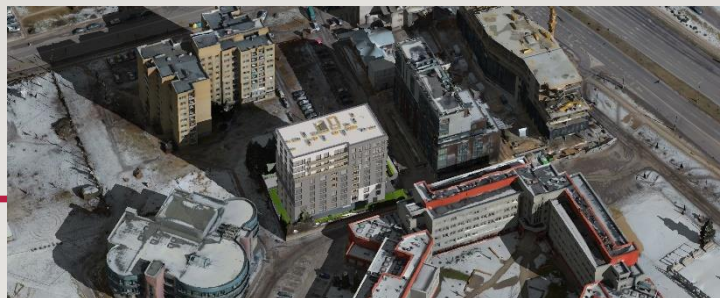
| Level Display - View 2 | |
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| TP-SA-SALTONISKES_2017 07 03_IFC.dgn | |
| Name | Used |
| MV - 200 Mineraline vata 200mm | • |
| NS - Stiklas aluminio tureklu | • |
| SF-100 Keramzitbetonio blokeliu pertvara | • |
| SF-EM8 Emalitas - Balkonu krastai | • |
| SF-FCP295 Fibrocementine plokste - Neve... | • |
| 0 - Lango Vidinis remas | • |
| SF-HPL260 Azurines juostos - ventiliuojam... | • |
| SF-KKP270 Neventiliuojamas fasadas | • |
| SF-TN270 Neventiliuojamas fasadas | • |
| SV - ventiliacijos apskardinimas | • |
| SG - Gelzbetonines sienos (iv storiu) | • |
| SK - Gipso blokeliu pertvaros (iv storiu) | • |
| SK - Keramzitbetonio blokeliu pertvaros (I... | • |
| SK - Keramkiniu kiaurymetu blokeliu pert... | • |
| SKK - Keramikos blokeliu kompleks pertv... | • |
| SKK - Keramzitbetonio kompleksines pert... | • |
| SS - Silikato blokeliu pertvaros (iv storiu) | • |
| ST-10 Stikline atitvara - tonuota neperma... | • |
| 0 - Lango Stiklas | • |
| A-WALL-_-OTLN | • |
| XX-Room Separation | • |
| Stair - Laiptai - daugiabuciai - pagrindiniai | • |
| Stair - Laiptai | • |
| LU-CGL100 - Akmens vatos lameles | • |
| Column - Apdaila - staciakampe uzapvalinta | • |
| Column - Betonas - Apvali | • |
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| Column - Kolona - Staciakampe | • |
| Durys - Buto isorines | • |
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Shadow analysis



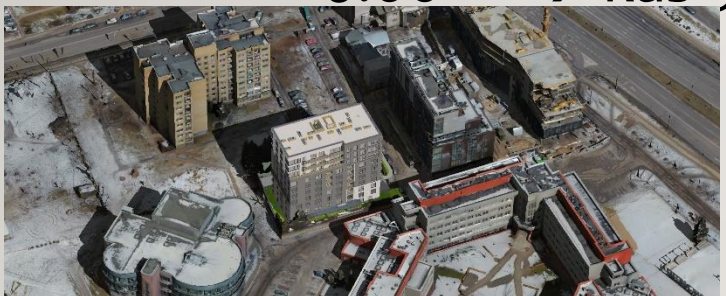
6:00 → kas 5 min.



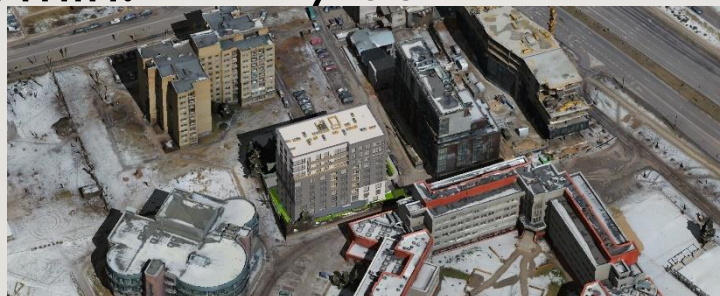
7:00



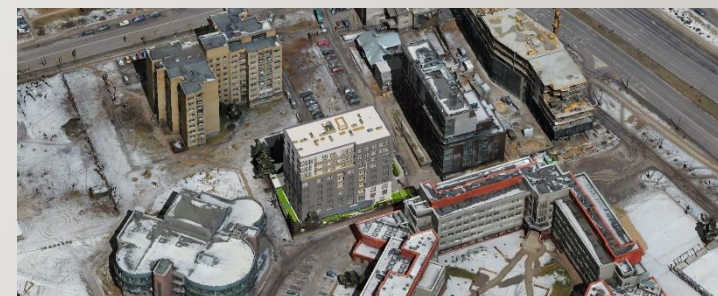
8:00



9:00



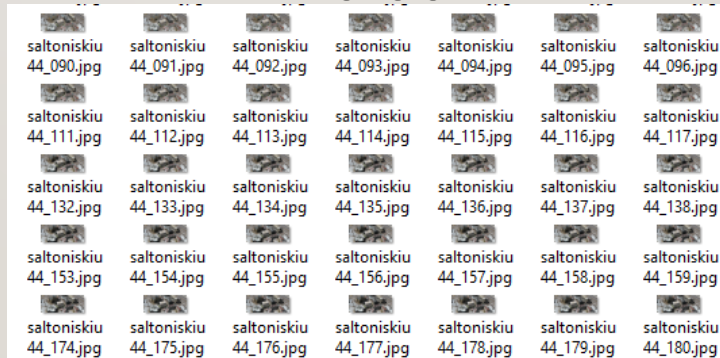
10:00



11:00

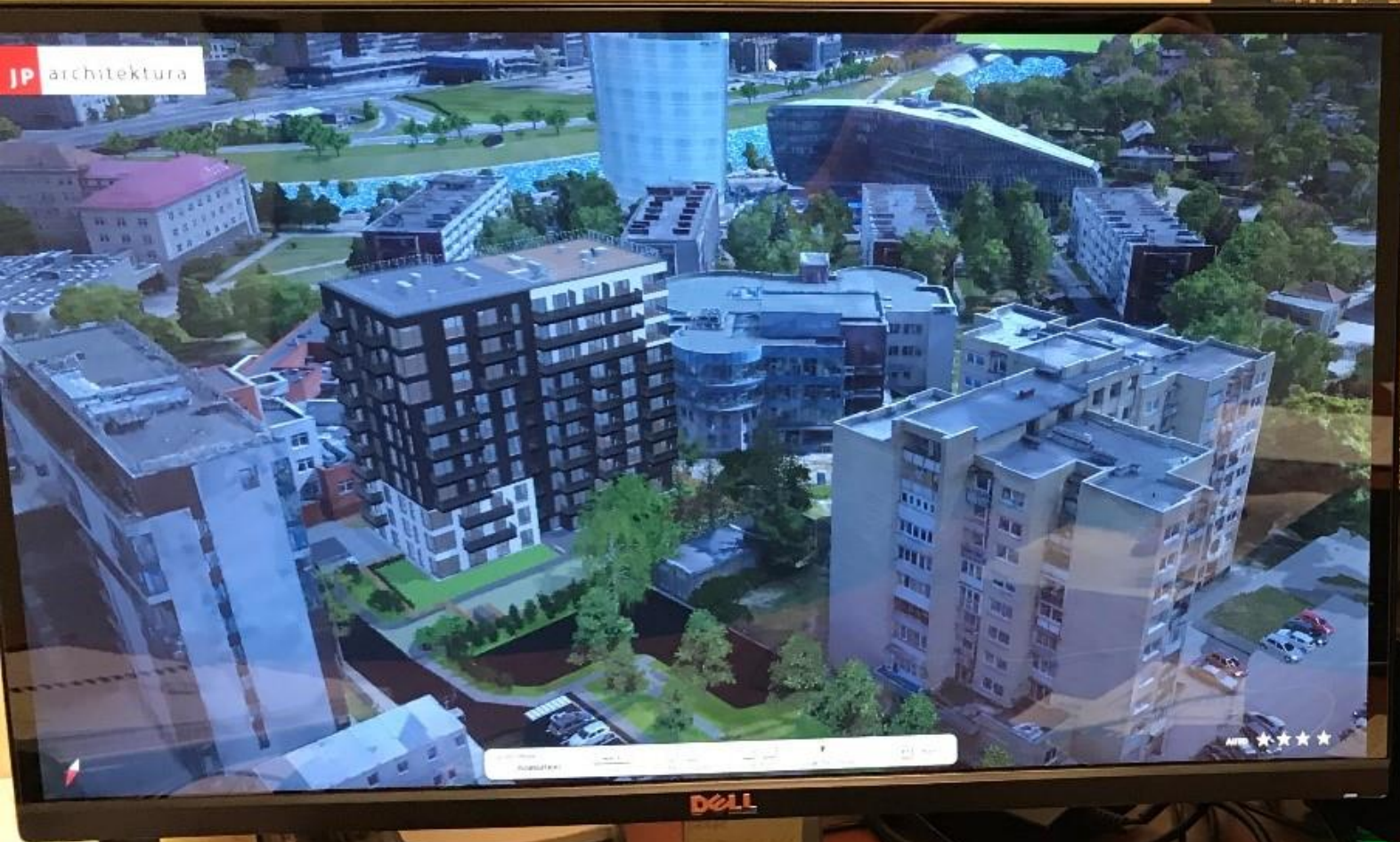


12:00 → kas 5 min.



→ iki 22:00

Virtual Reality Workshop







Algirdas Kaušpēdas

Certified Architect, Projects Manager, JP Architektūra

„The building, which was designed to integrate coherently into the architectural, natural, economic and social context, gains the exceptional residual value.

I see that BIM will become reality and everyday use in near future. Those, who are already concerned and have begun to fully work in the form of digital design, will have many advantages over others.“



Andrius Beniušis

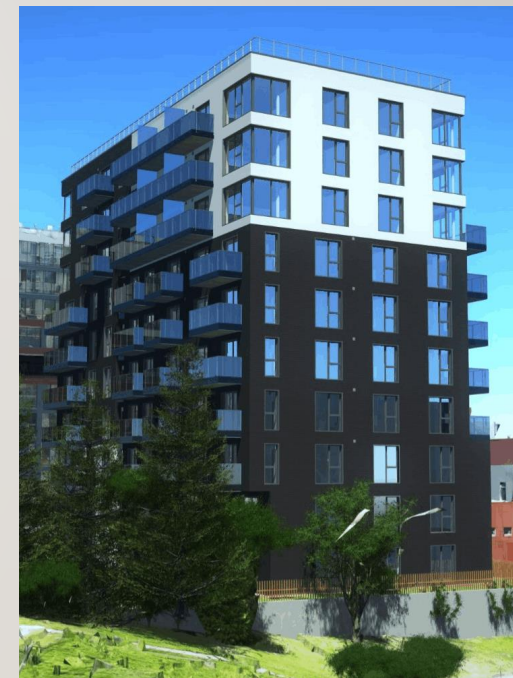
Director of the „Žvėryno vakarai“ project

„The first impression – „cosmos“ is the most beautiful meaning of the word. I think, it's one of the best marketing decisions in this project!

We can walk around the apartments, scout through each window, fly around! This tool will be very useful not only for our clients, but also for our decision on various project improvements, because everything is done very realistically!

Many thanks to „JP Architektūra“ for idea and to „IN RE“ for implementation!“

ŽVĖRYNO
VAKARAI





7 residential houses at Didlaukio street, Vilnius

UAB „Veikmės projektai“

UAB „IN RE“



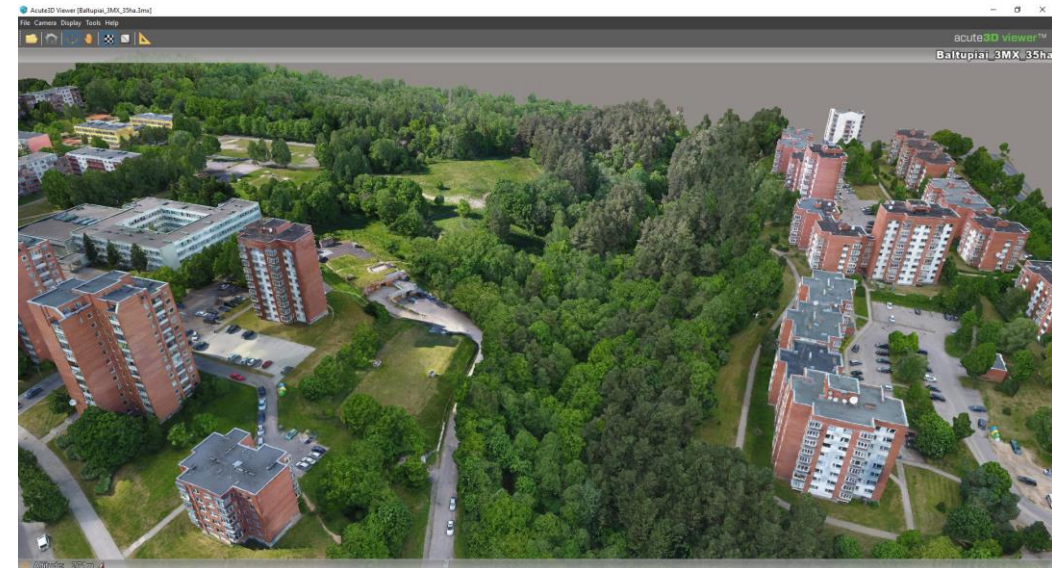
Evaluation of current conditions

UAB „Veikmės projektai“ first time used virtual reality technologies, based on digital photogrammetry recreating the realistic environment of designed object

The virtual model of the site allowed to evaluate the environment for 7 residential buildings being designed, check the terrain and vegetation impact into future buildings and site design



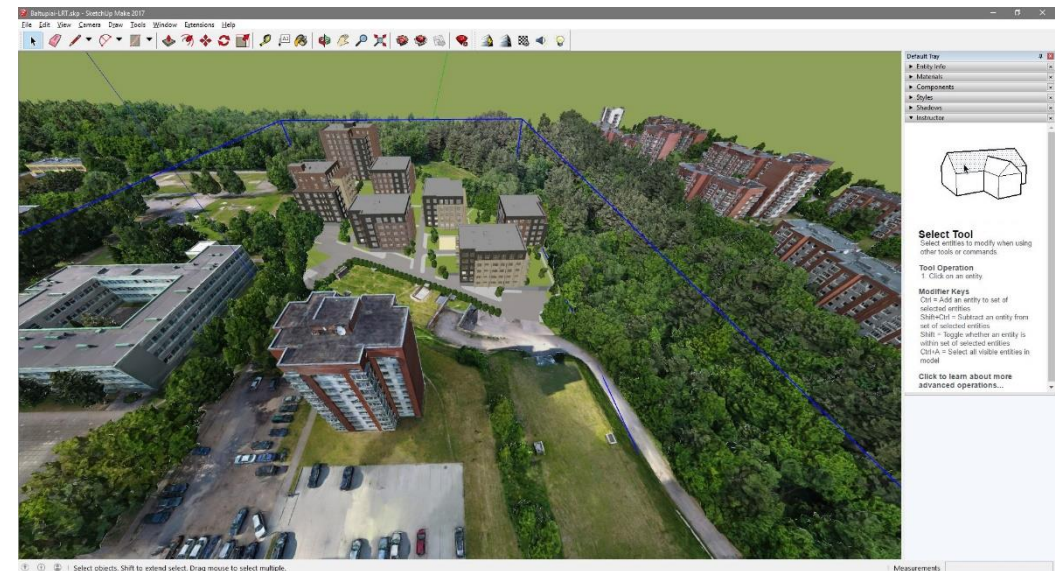
ContextCapture
CONNECT Edition



Decision making at early design stages

The BIM models of buildings, designed in Revit, together with textures, transparent glasses and other features, were integrated into the reality model, covering 35 ha territory plot to reality model using SketchUp application

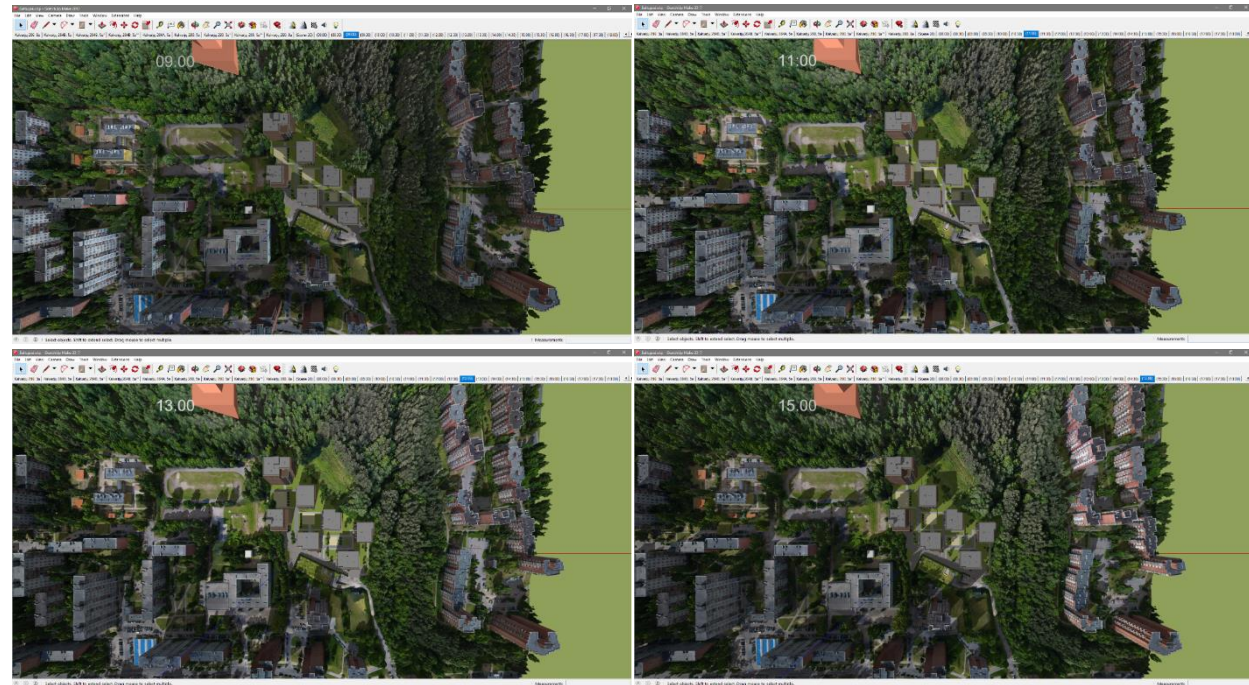
Reality model allowed to check design solutions, estimate the solar exposure, the visual impact of future buildings to the environment, present project solutions to neighbouring residents and get approvals from controlling institutions





The use of BIM for sustainability and green construction

- The unique solution in this project was to use the virtual reality model not only for evaluating the impact to environment, but also the impact of existing environment to the designed buildings and infrastructure
- In SketchUp Make application the views with solar lighting for every 30 minutes were created and animated for the evaluation of shadow dynamics





Kalvarijų 286, 9a | Kalvarijų 284B, 5a | Kalvarijų 284B, 5a* | Kalvarijų 284B, 5a** | Kalvarijų 284A, 5a | Kalvarijų 280, 5a | Kalvarijų 280, 5a* | Kalvarijų 280, 5a** | Kalvarijų 280, 8a | (Scene 20) | (08.00) | (08.30) | (09.00) | (09.30) | (10.00) | (10.30) | (11.00) | (11.30) | (12.00) | (12.30) | (13.00) | (13.30) | (14.00) | (14.30) | (15.00) | (15.30) | (16.00) | (16.30) | (17.00) | (17.30) | (18.00)





WE CAN DO MORE TOGETHER

Computer-Aided Engineering Services

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