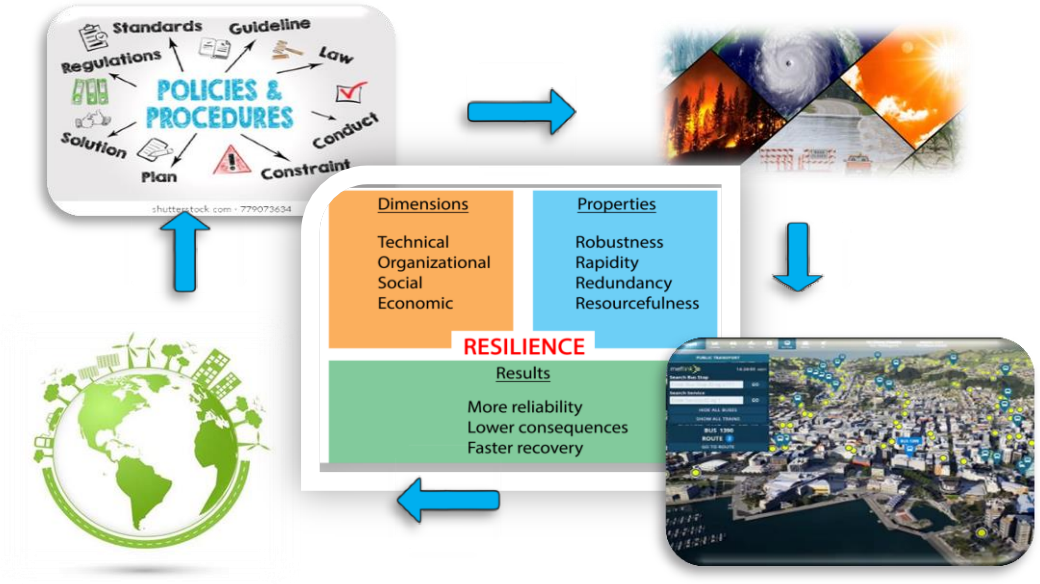
NEW RESEARCH THRUST AT PITT



Presenters:

Julie Vandenbossche, PhD, PE

Alessandro Fascetti, PhD

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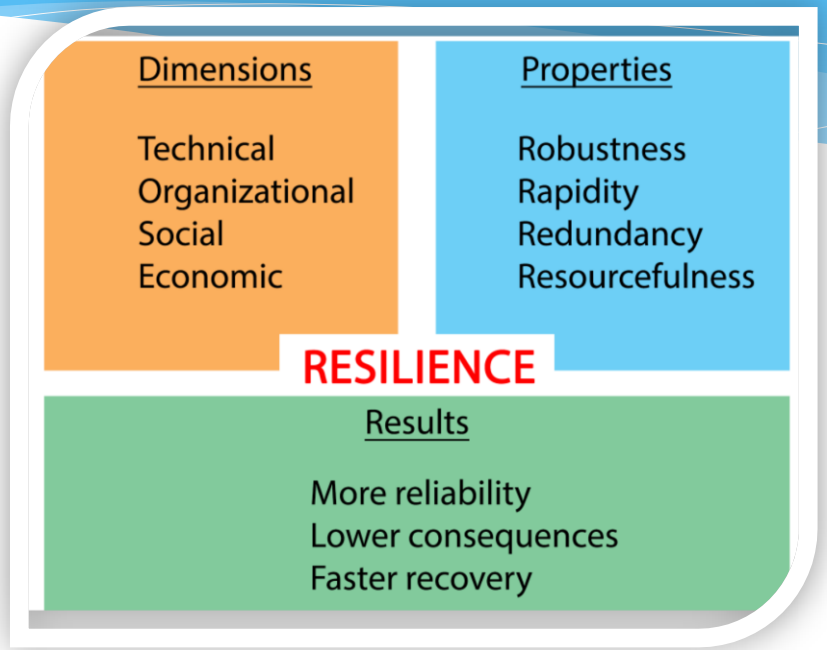
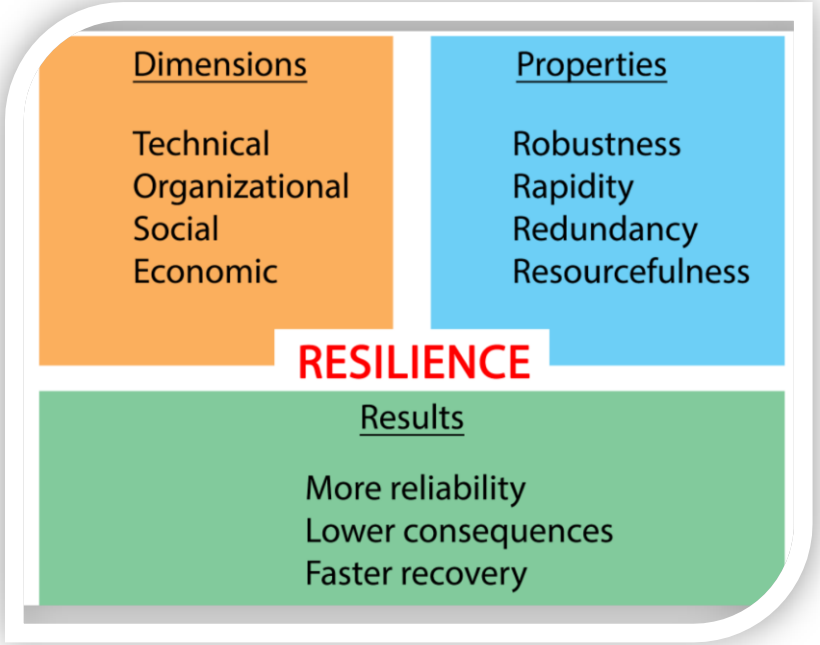


Develop new policy so more sustainable solutions can be incorporated into practice.
Collaborators: GISPA

Climate Change

https://www.noaa.gov/education/resource-collections/climate/climate-change-impacts

Quantify the effect of sustainable solutions
Pitt Collaborators: Climate and Global Change



Sustainability

- **Develop more sustainable solutions for climate resilient designs/materials**
- **Quantify the benefits of solutions (LCCA)**

Pitt Collaborators: MCSI

NEW CEE THEME: Engineer Solutions (Design and Materials) for Climate Resiliency

DISCOVER Lab (AR/VR/MR); PITTS Lab (Driving simulator); PMML & iSMaRT Lab (Sensing @ materials)
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Sustainability

Dimensions	Properties
Technical Organizational Social Economic	Robustness Rapidity Redundancy Resourcefulness

RESILIENCE

Results

More reliability
Lower consequences
Faster recovery

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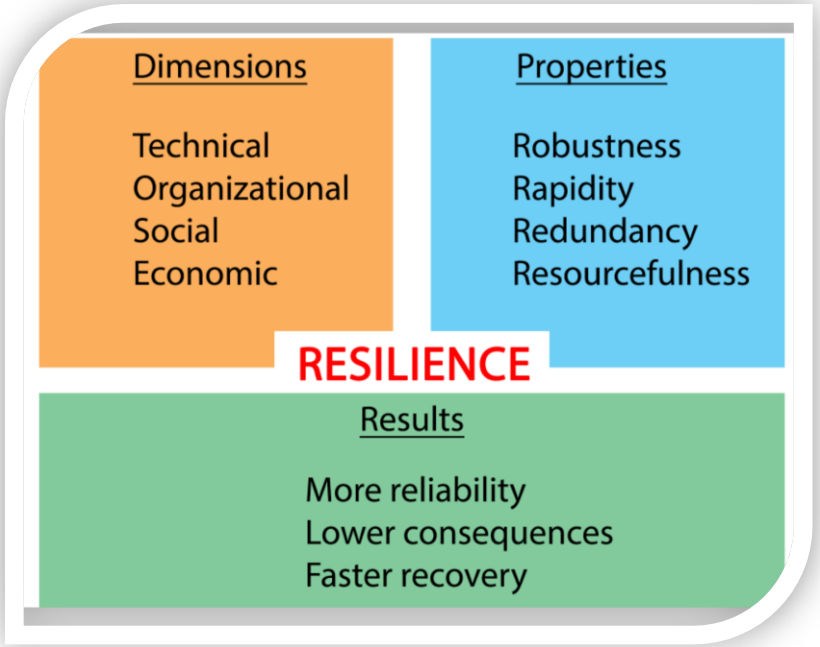

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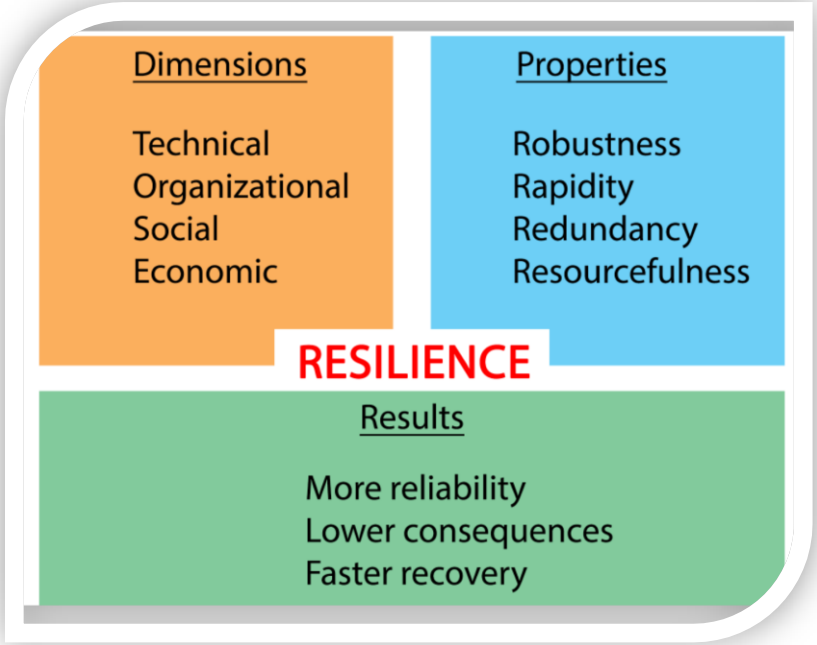

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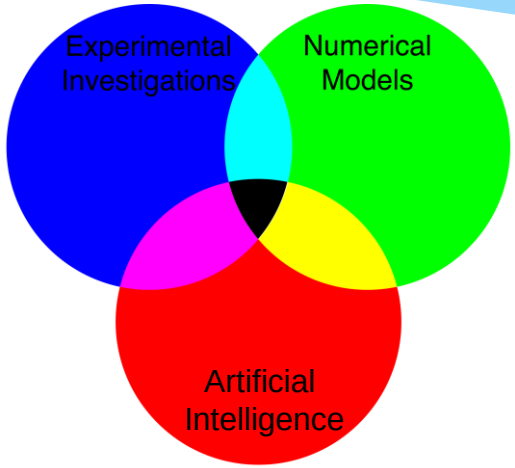
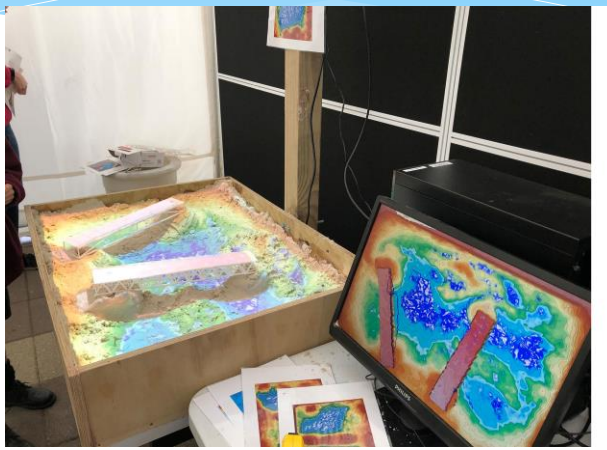
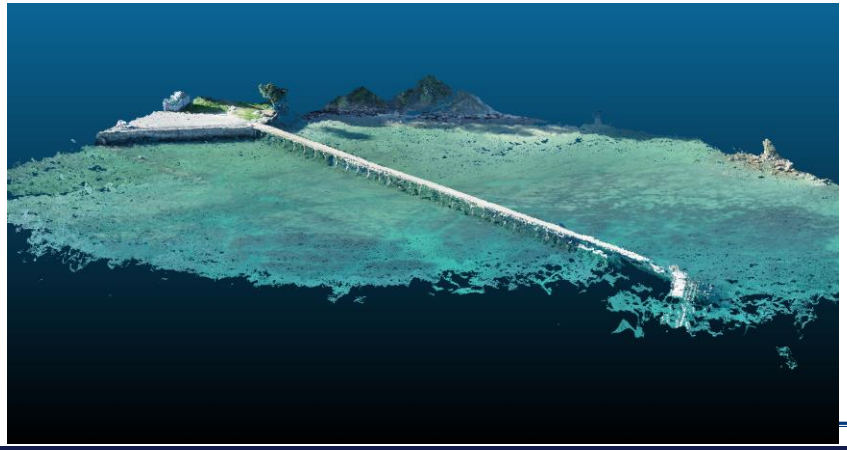
NEW DISCOVER LAB

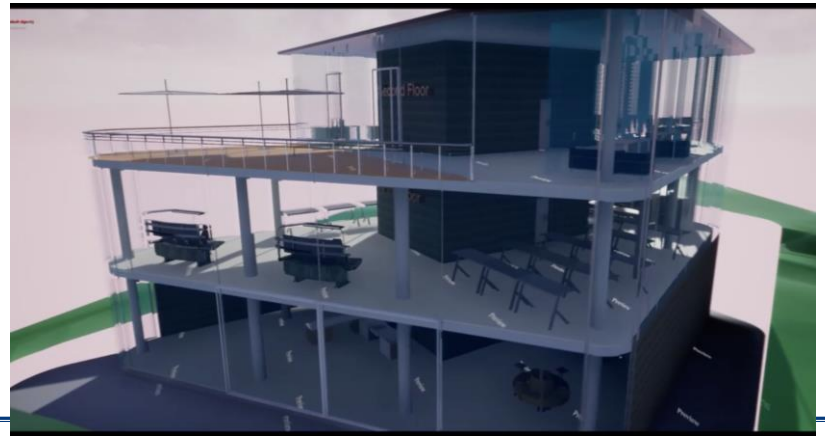
Disruptive Advancements

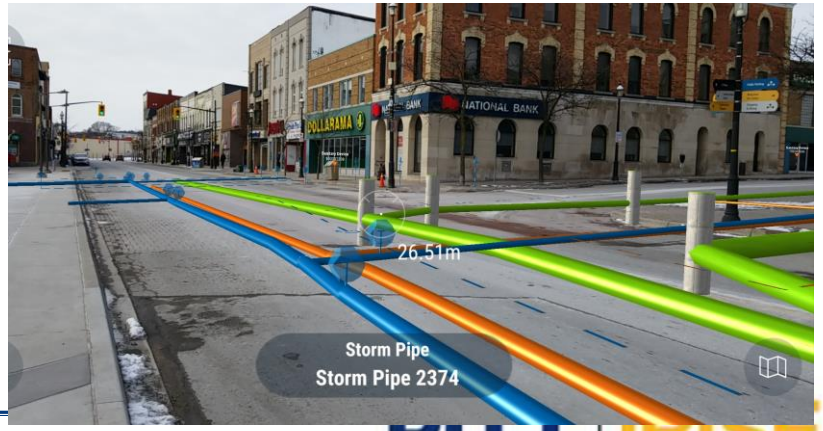
- *Computational Mechanics*
- *Big Data & Artificial Intelligence*
- *Automation*
- *VR/AR*
- ***Resilient Structures, Cities, Workplaces***



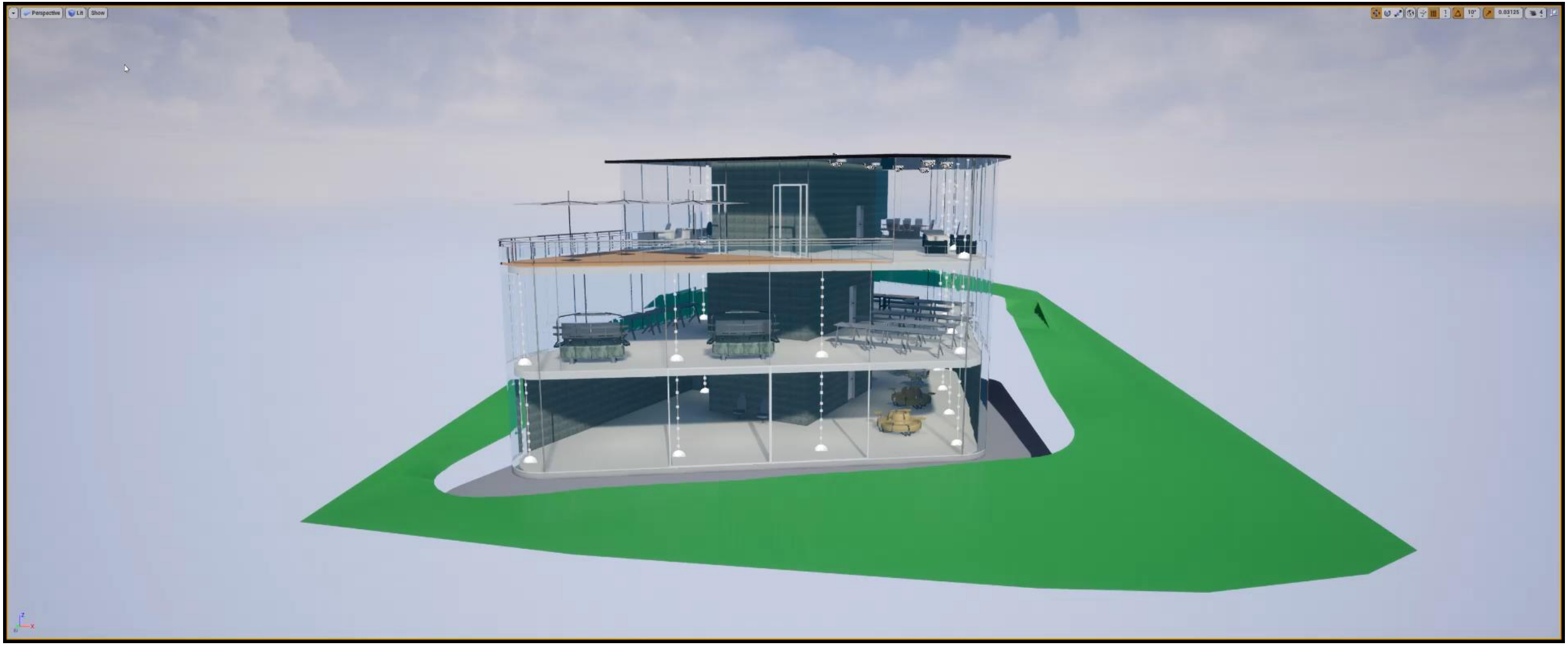






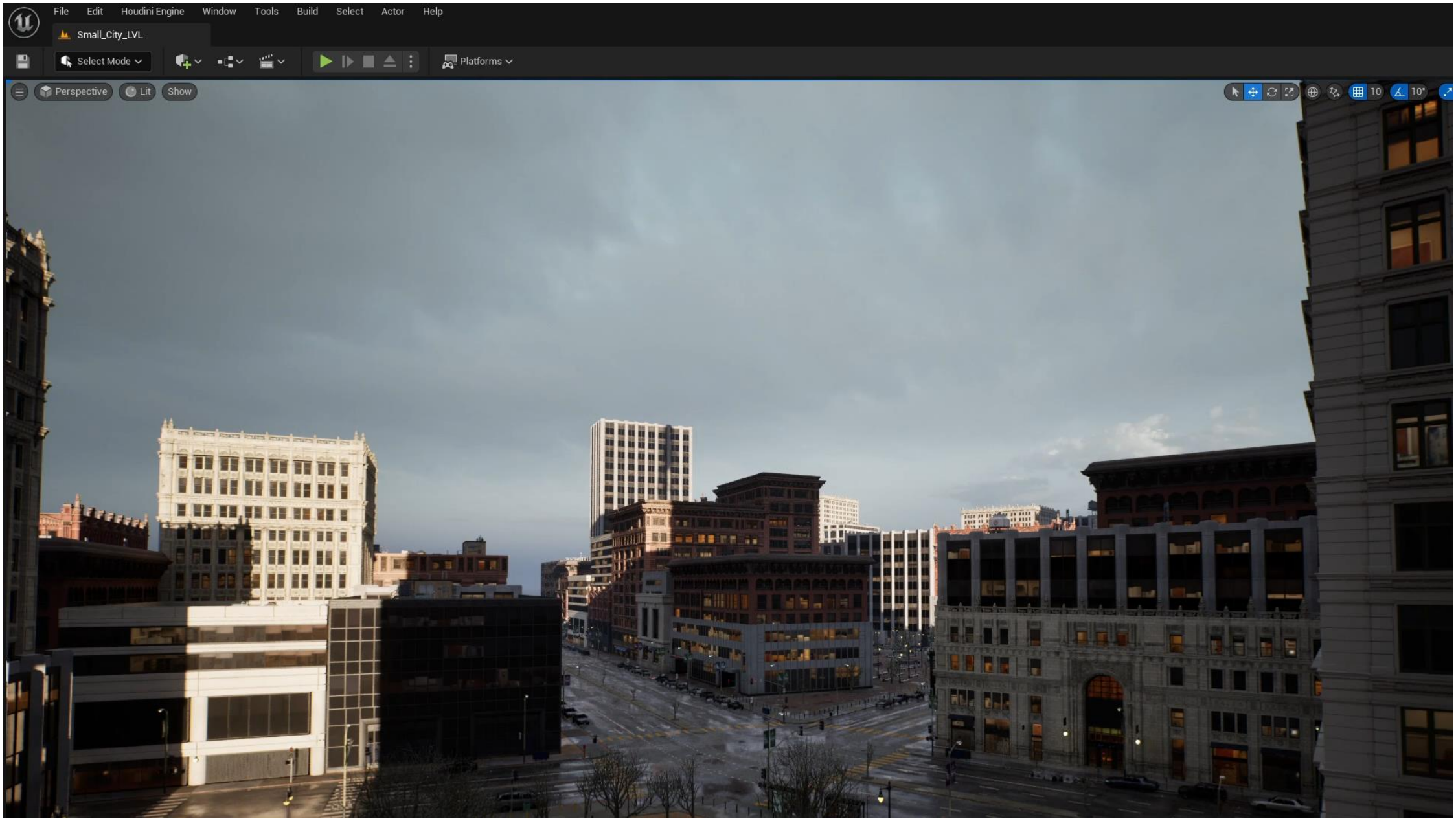


Research Highlight: Virtual Reality Immersive Simulations for Seismic Awareness and Preparedness



Digitalization of the Built Environment

Digital Twin Modeling

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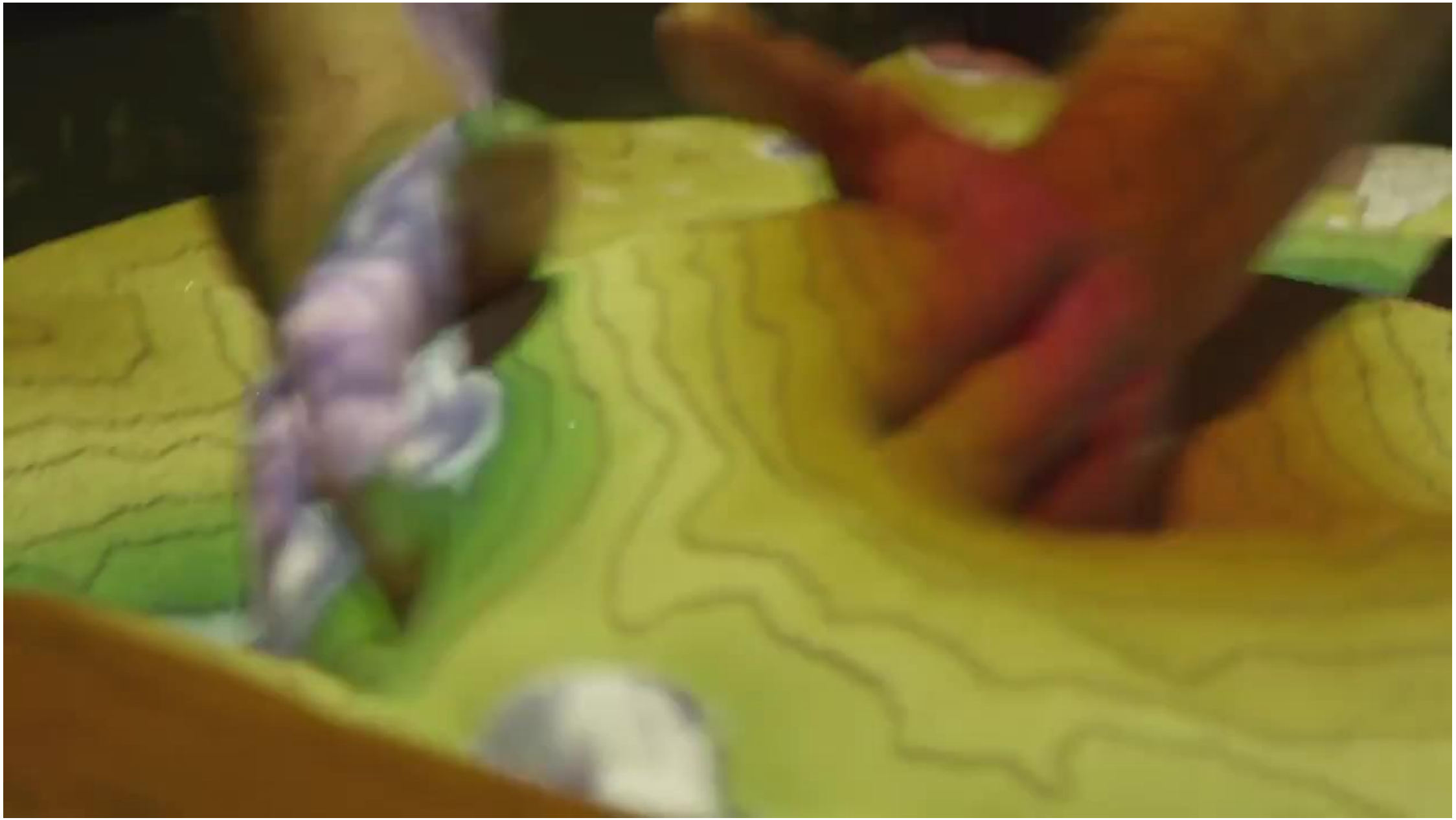
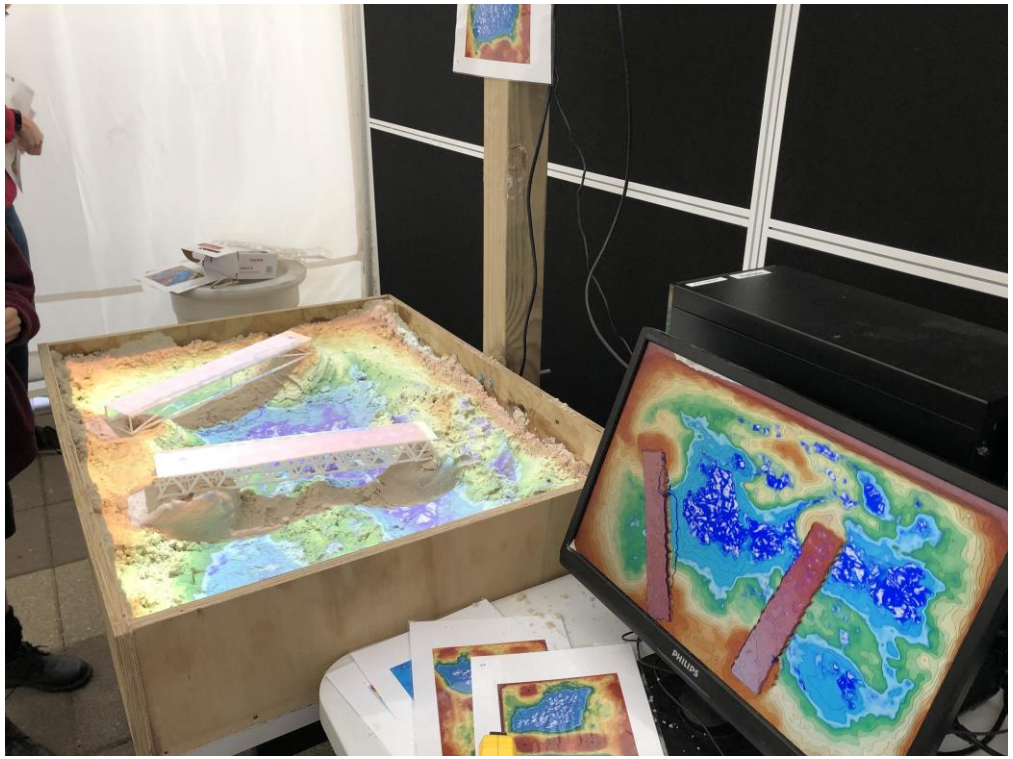
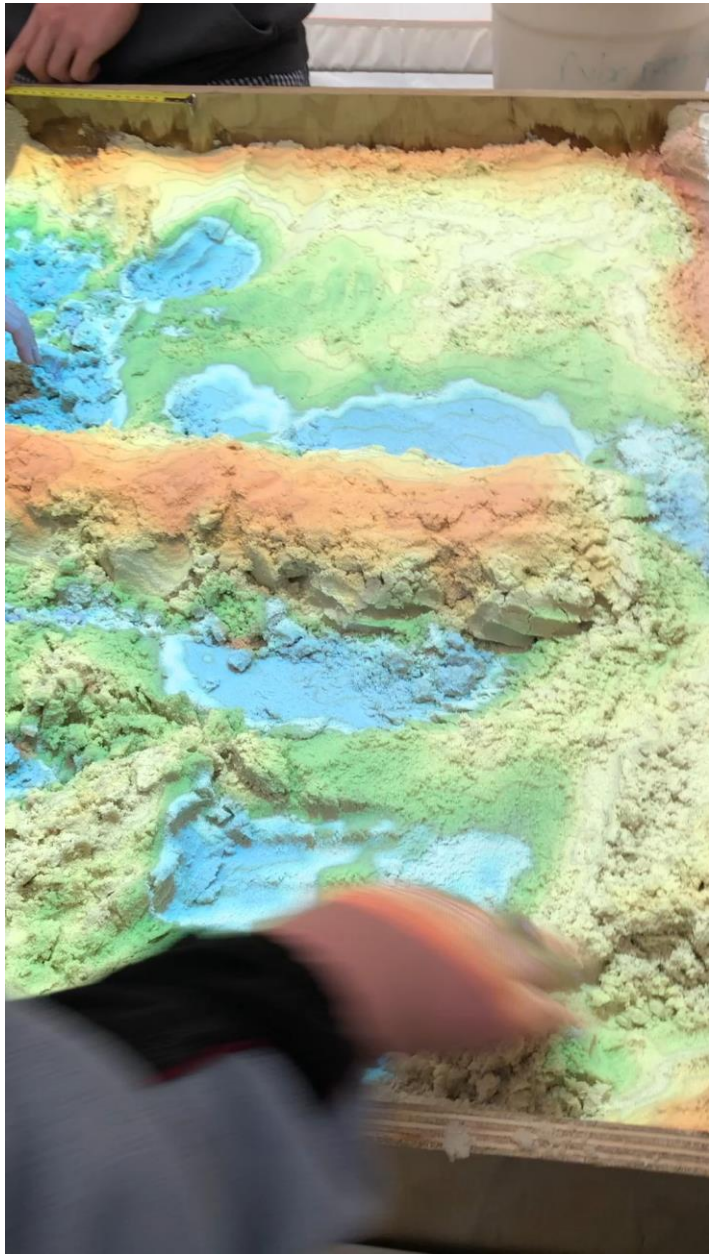


Digitalization of the Built Environment

Augmented Reality





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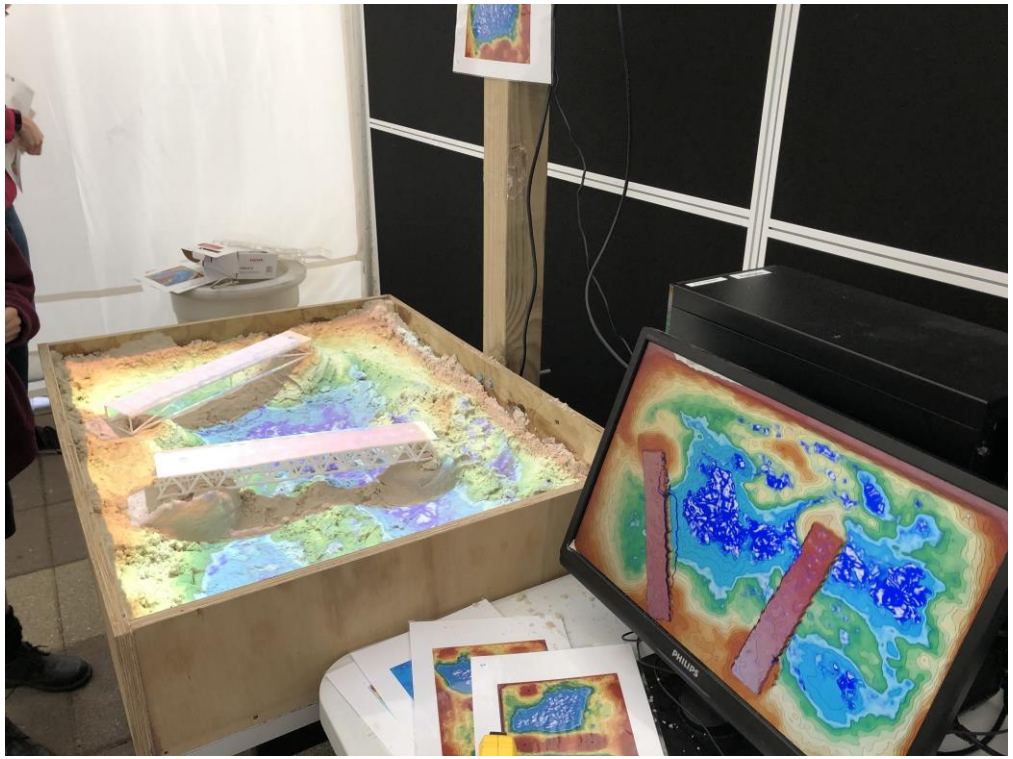
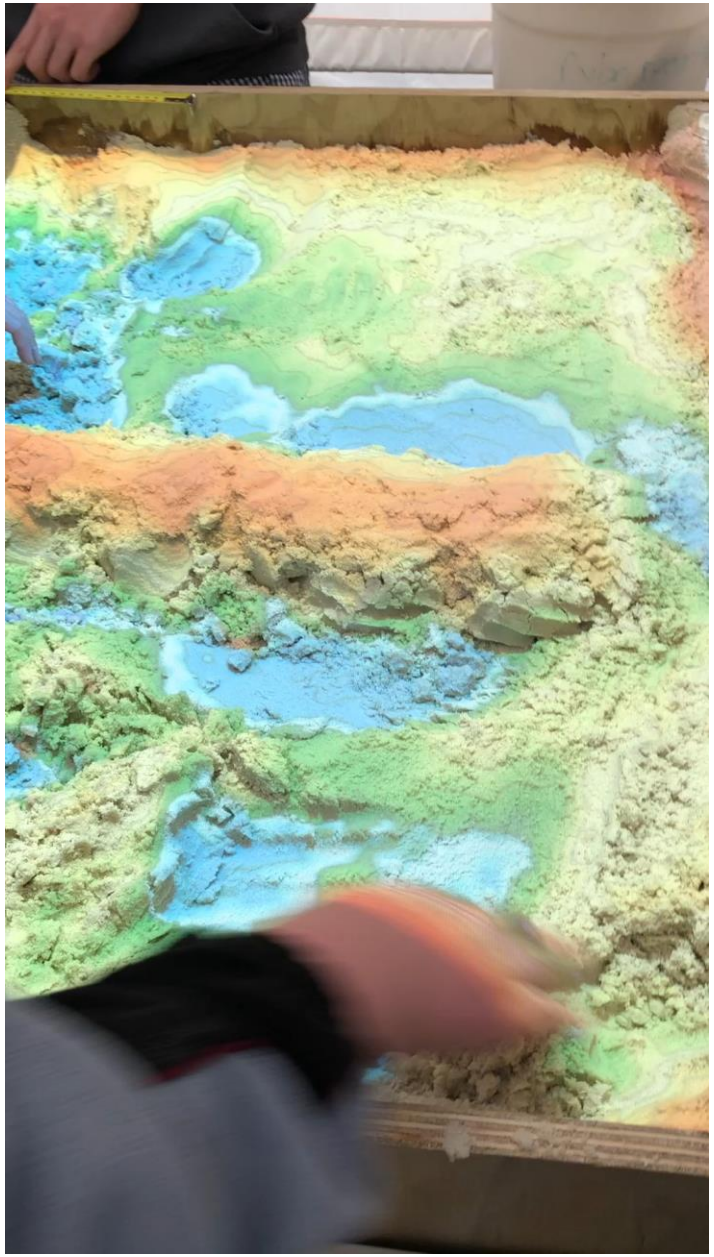
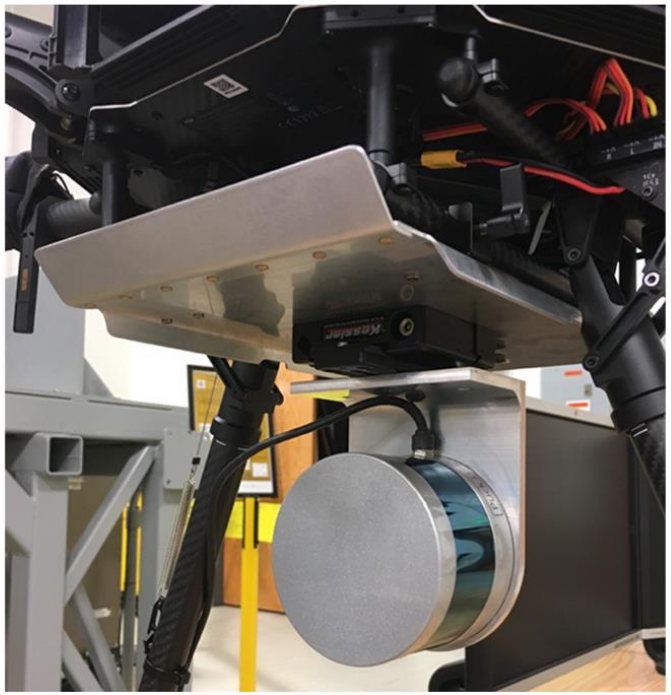




Digitalization of the Built Environment

Remote Sensing for Infrastructure Digitalization



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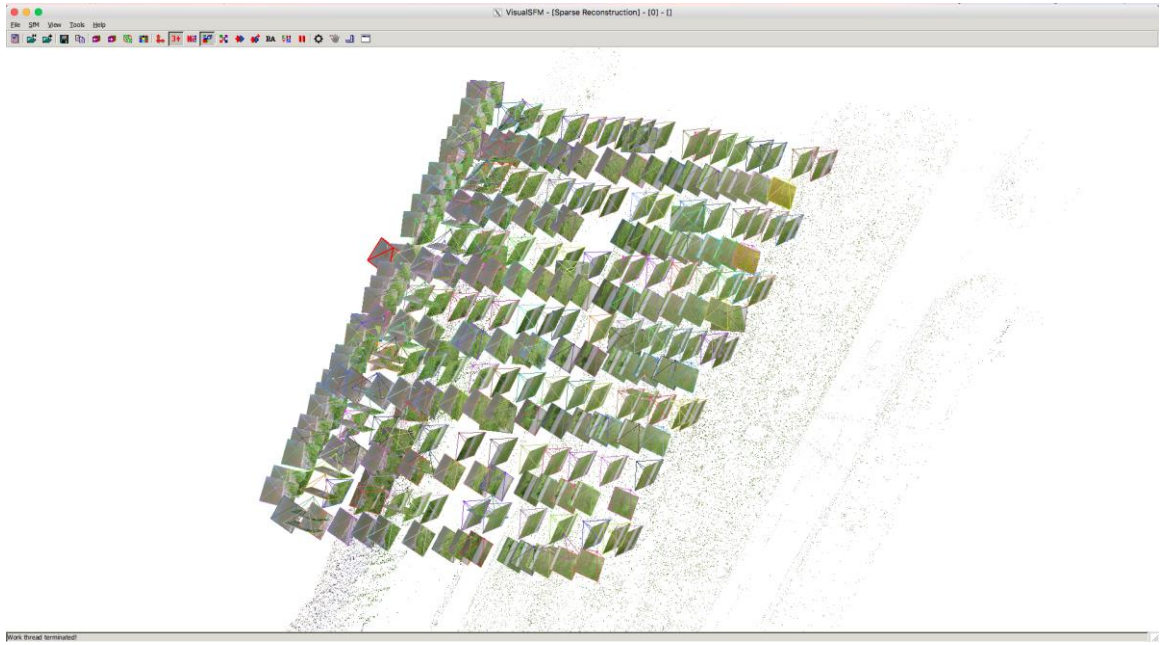

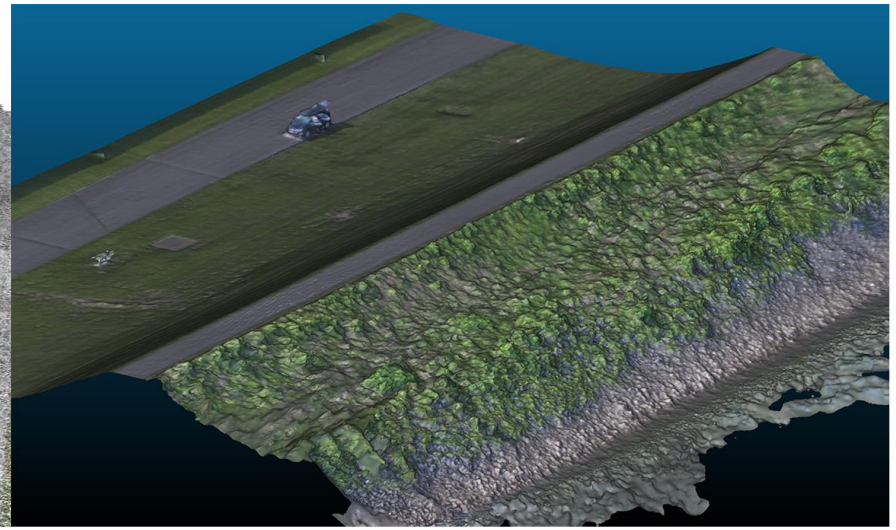

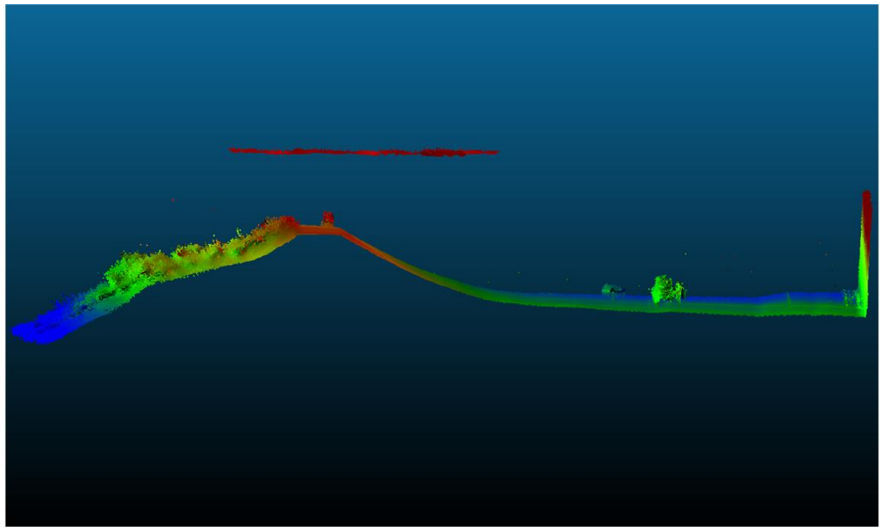

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