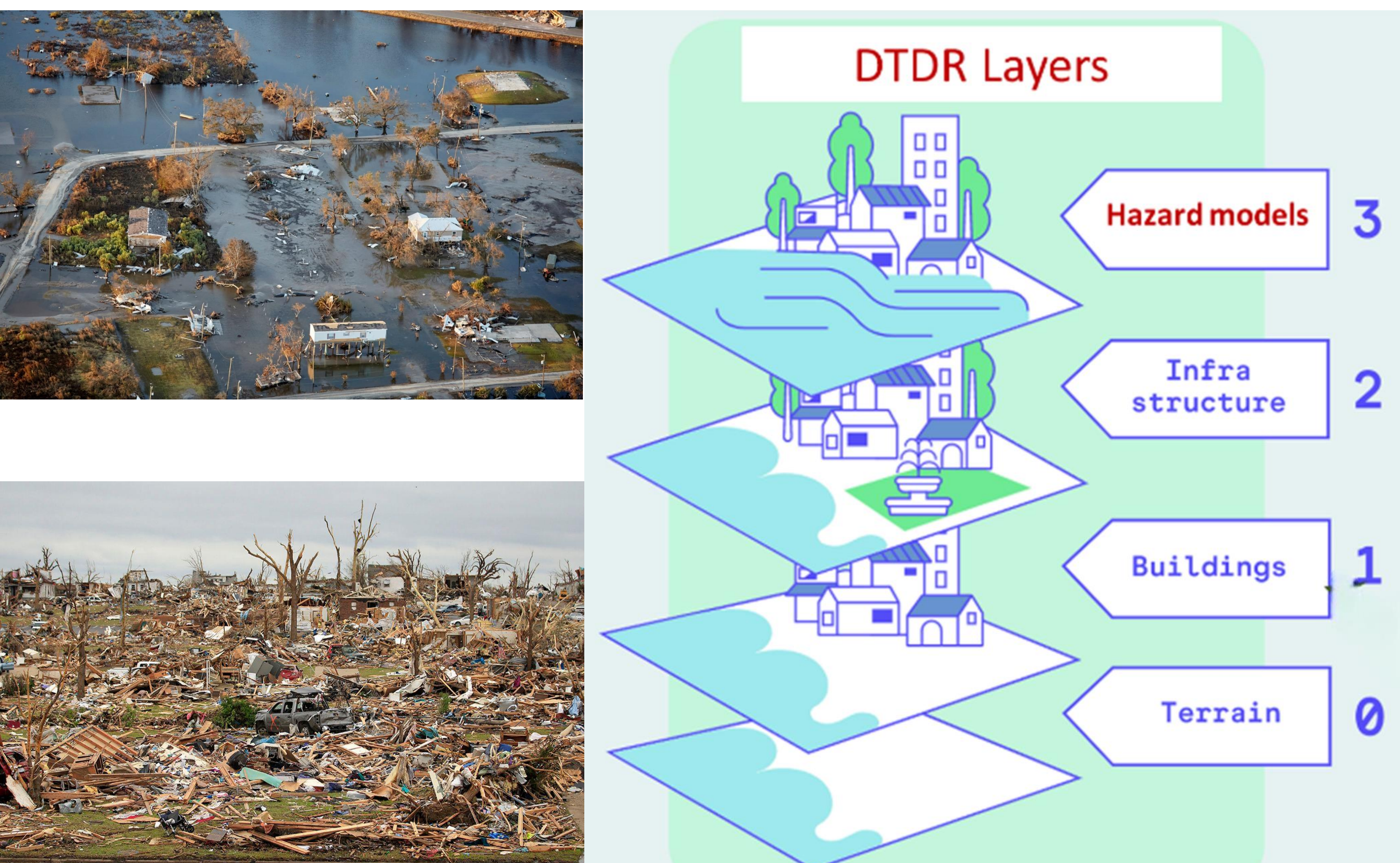


Digital-Twin for Disaster Resilience (DTDR)

Jiamin Dang, Huan Ning, Shanshan Shi, Zhenlong Li, Grace Yan

Introduction



DTDR for resilience planning

Objectives

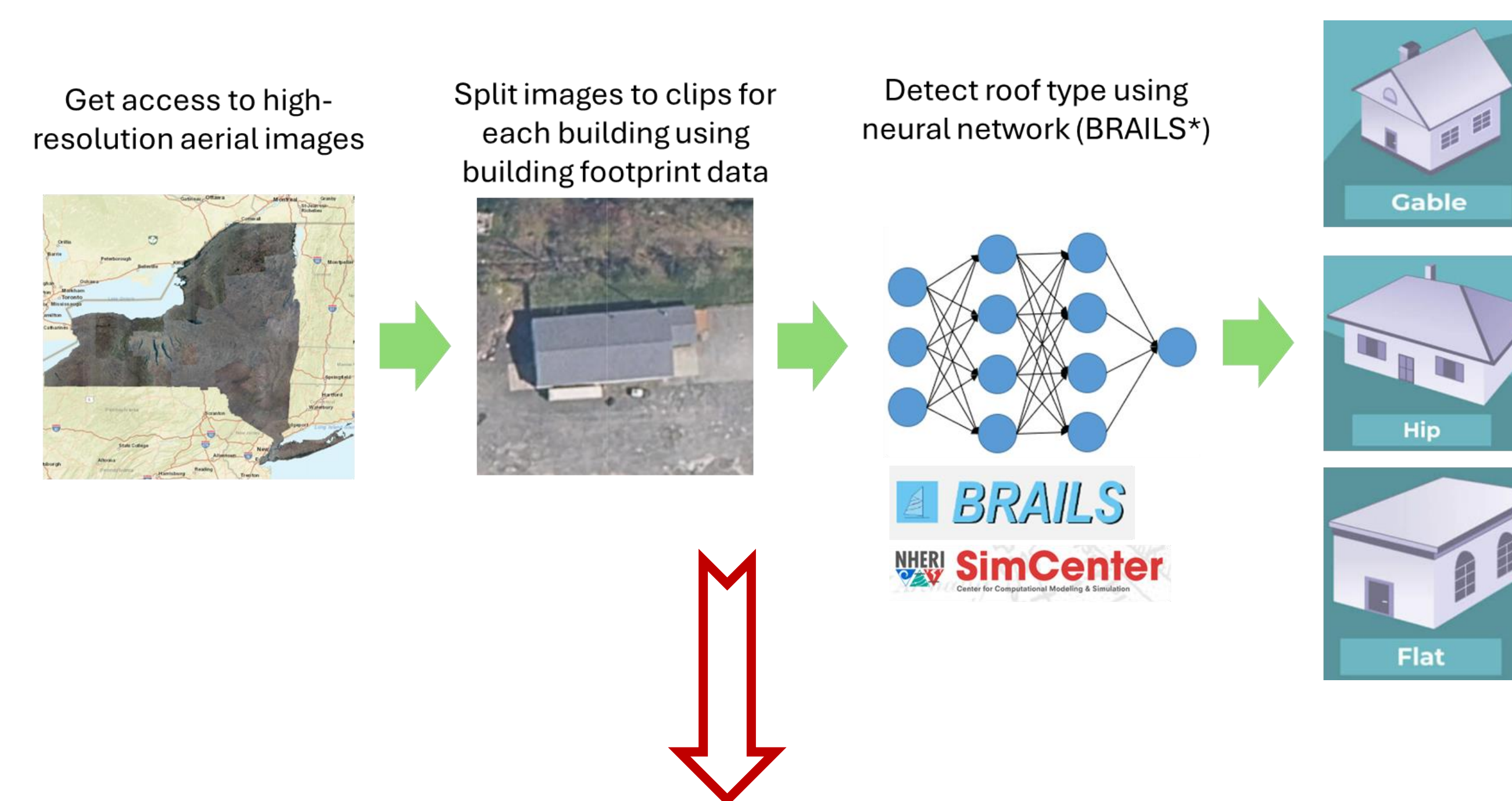
- Help planners experiment with solutions to **enhance community resilience**
- Take proactive steps for **multi-hazard resilience planning**

Acknowledgements

Great thanks to Dr. Jeanne Singquefield and Taylor Geospatial Foundation for their generous financial support!

Methods to Obtain Data for Building DTDR

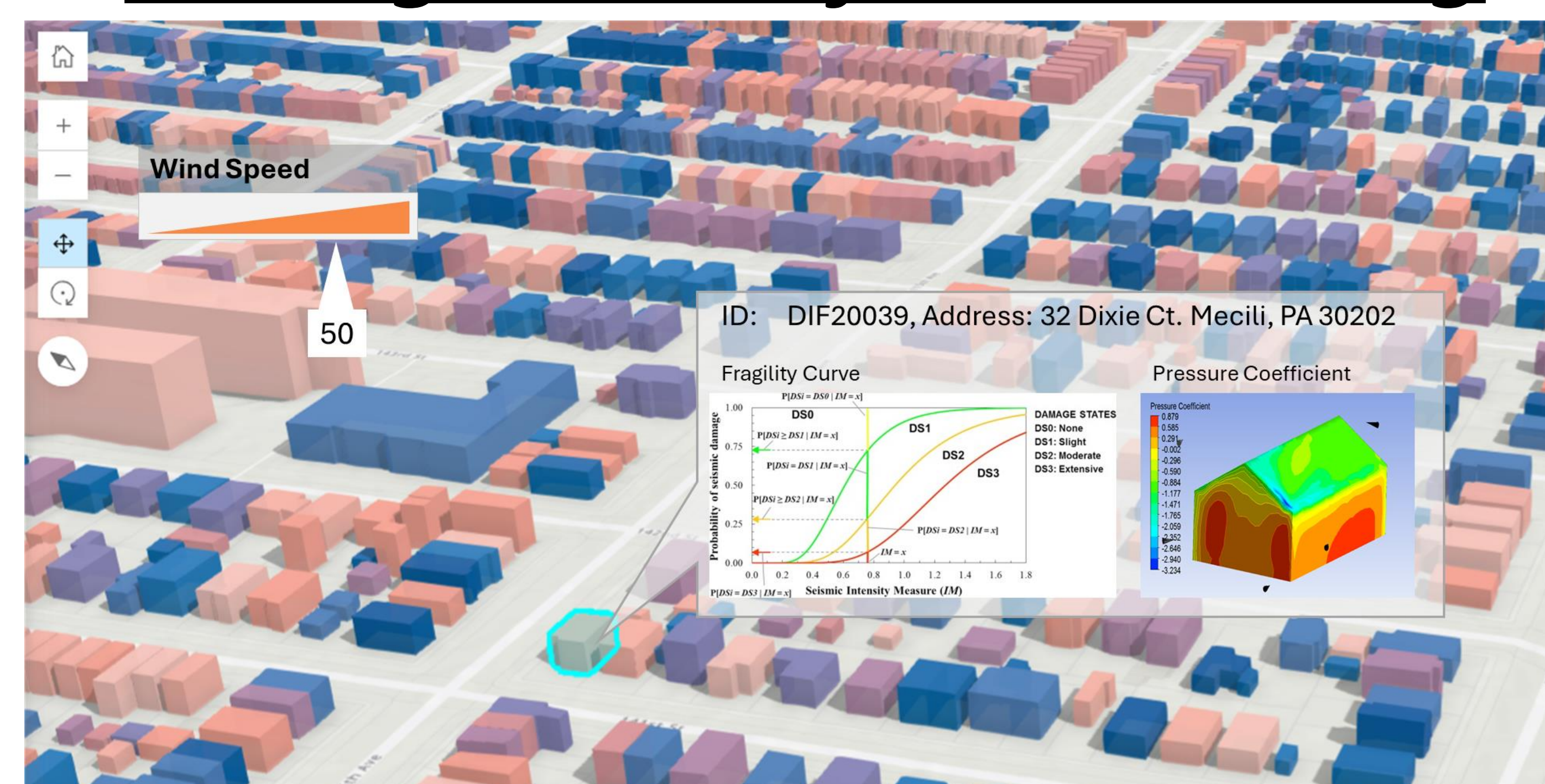
Develop Advanced DL Network to Extract Critical Building Attributes



Expected product of the Task 1

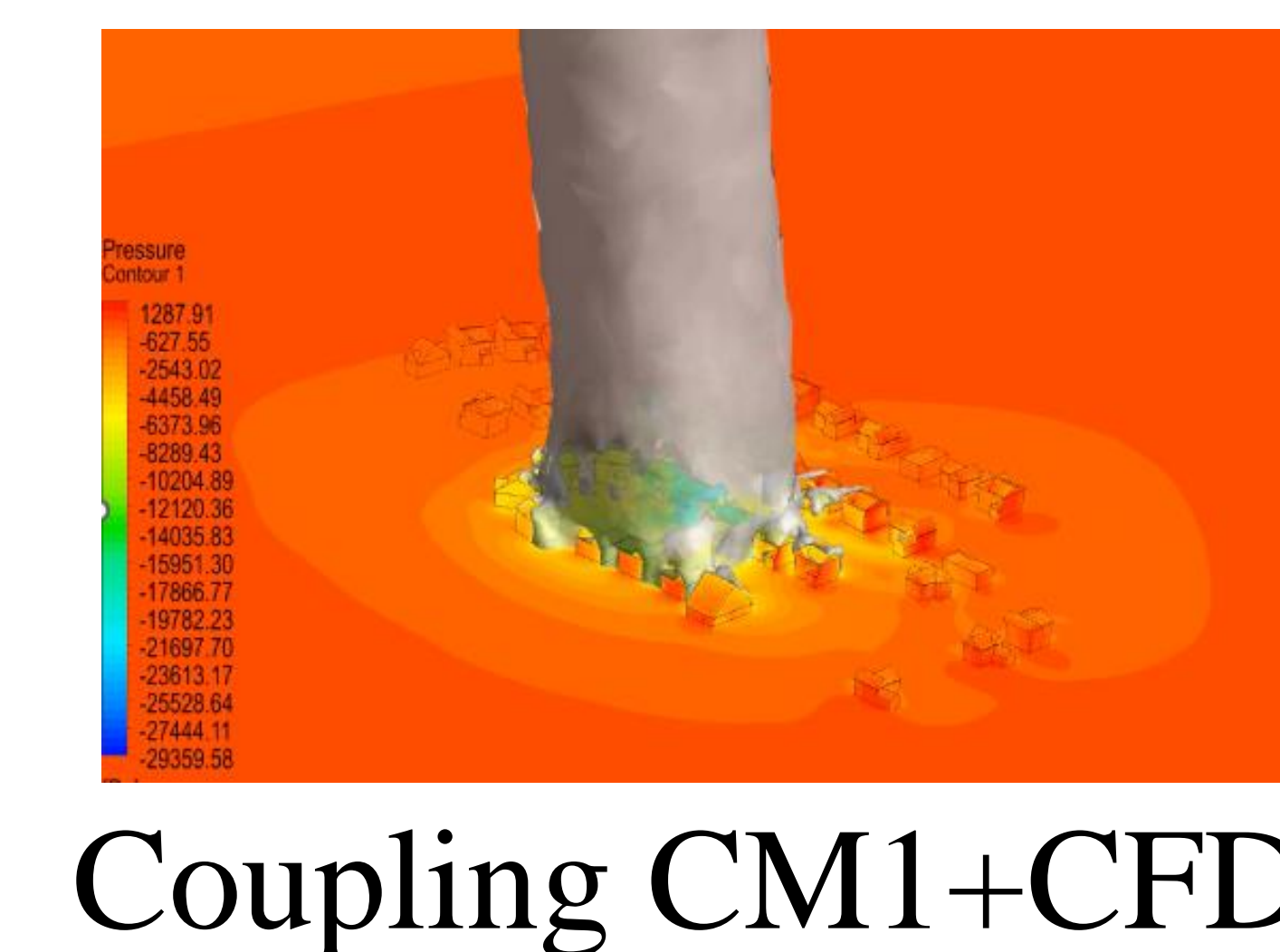
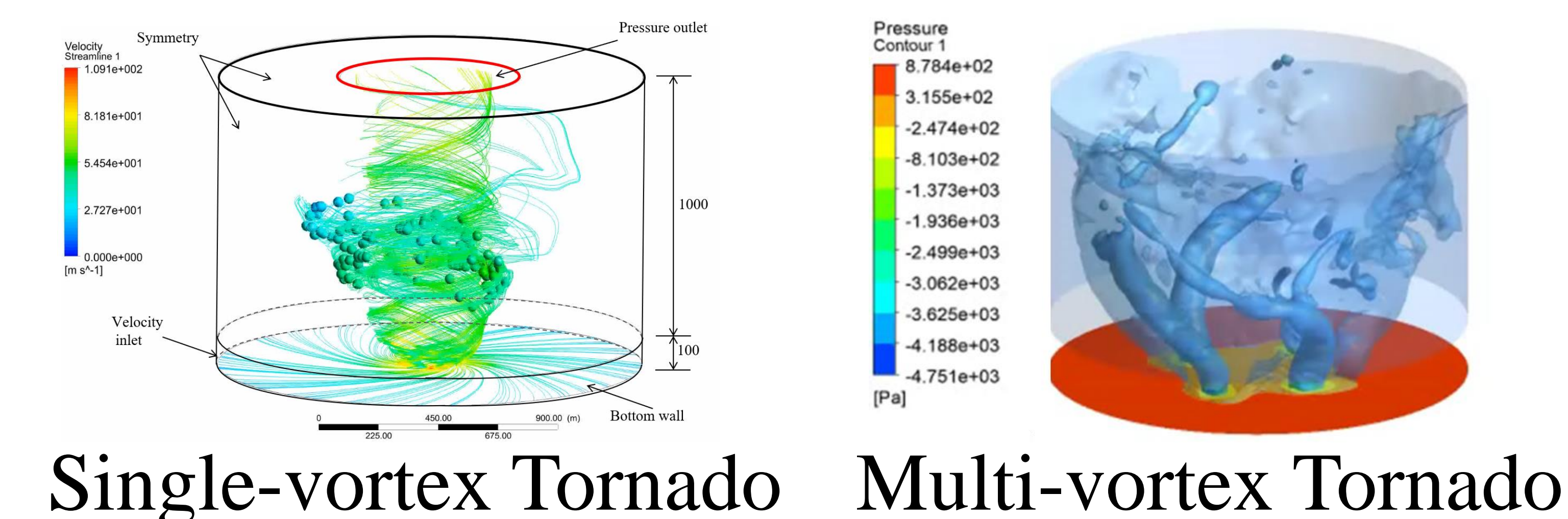
Final Product: DTDR

Damage State of Each building

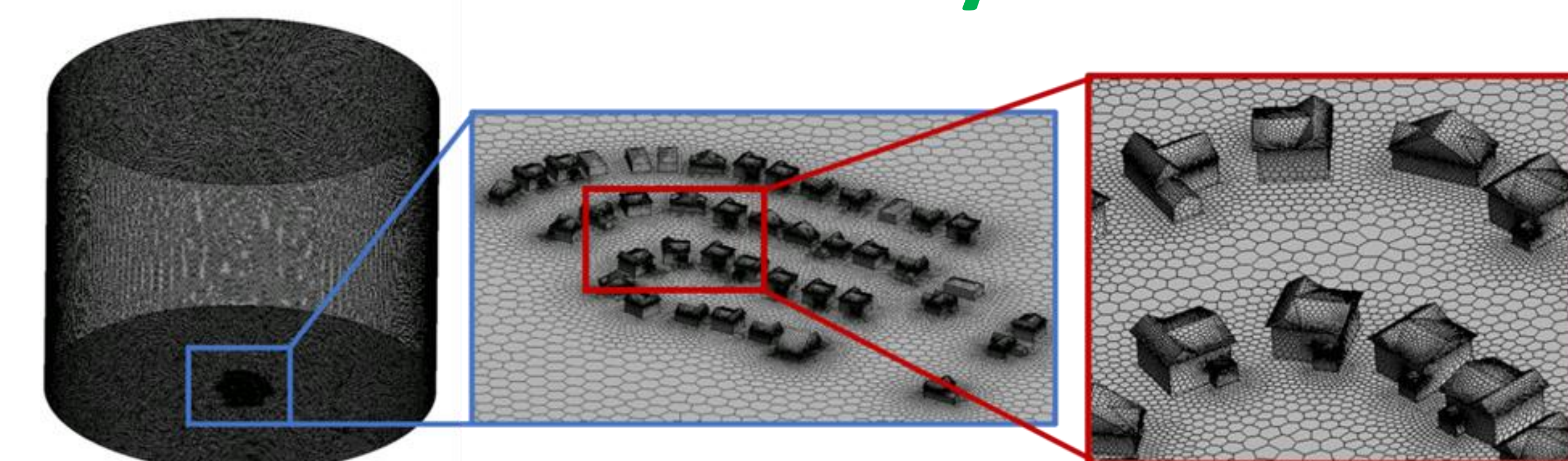


High-fidelity Tornado Hazard Model and Form DTDR

Simulation for Tornadoic winds



Tornado-Community Interaction



Pressure Coefficients on Building

