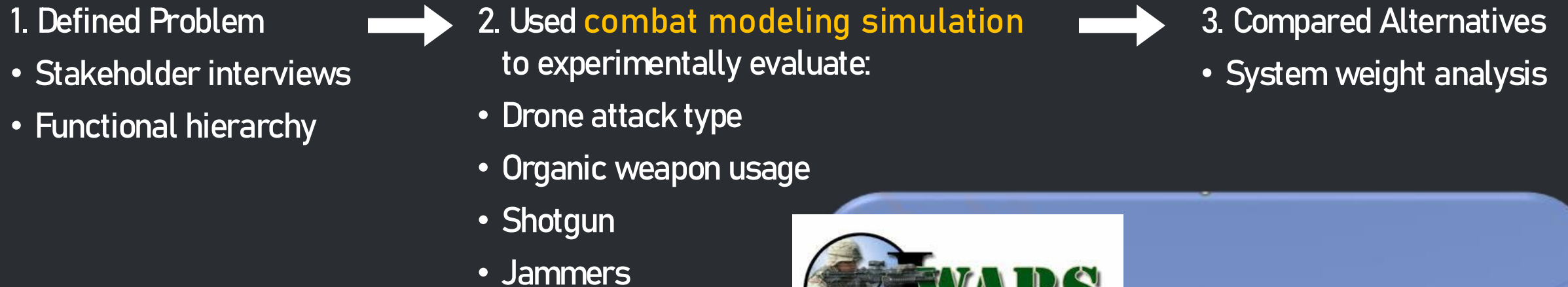


# Simulating Drone React to Contact

## How can light infantry platoons counter small UAS attacks?



### Methodology

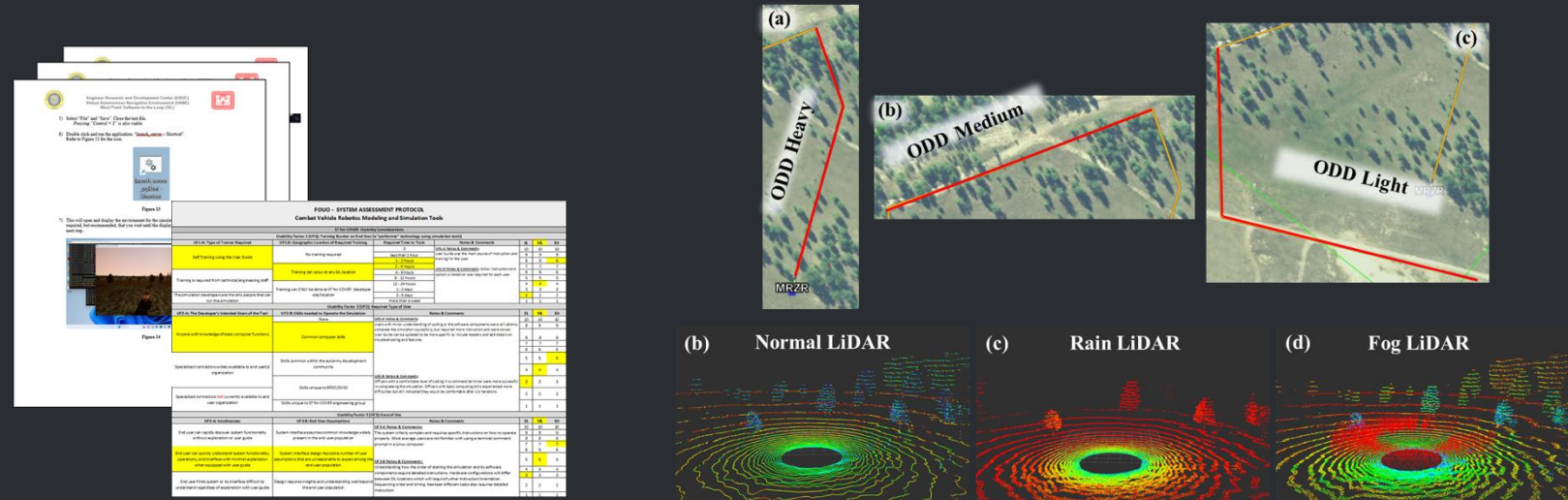
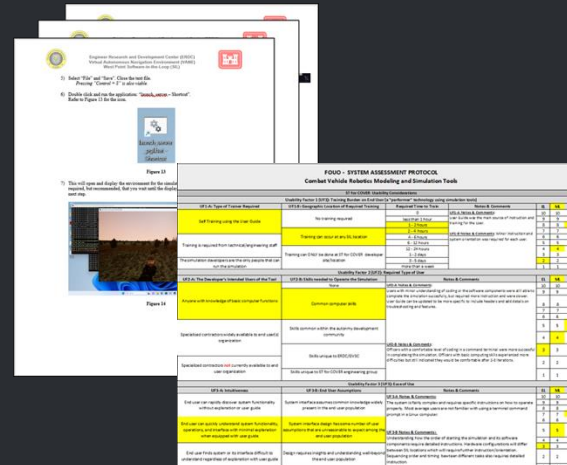
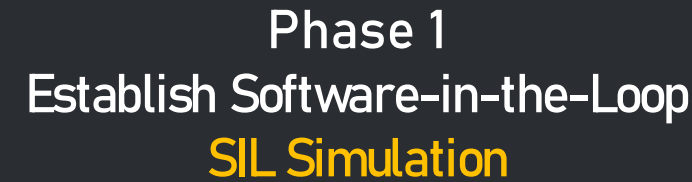


### Results

- Shotguns & jammers increased combat effectiveness
- However, shotguns present fratricide risk & additional training requirements



# How does weather affect the performance of Autonomous Ground Vehicles (AGVs)?

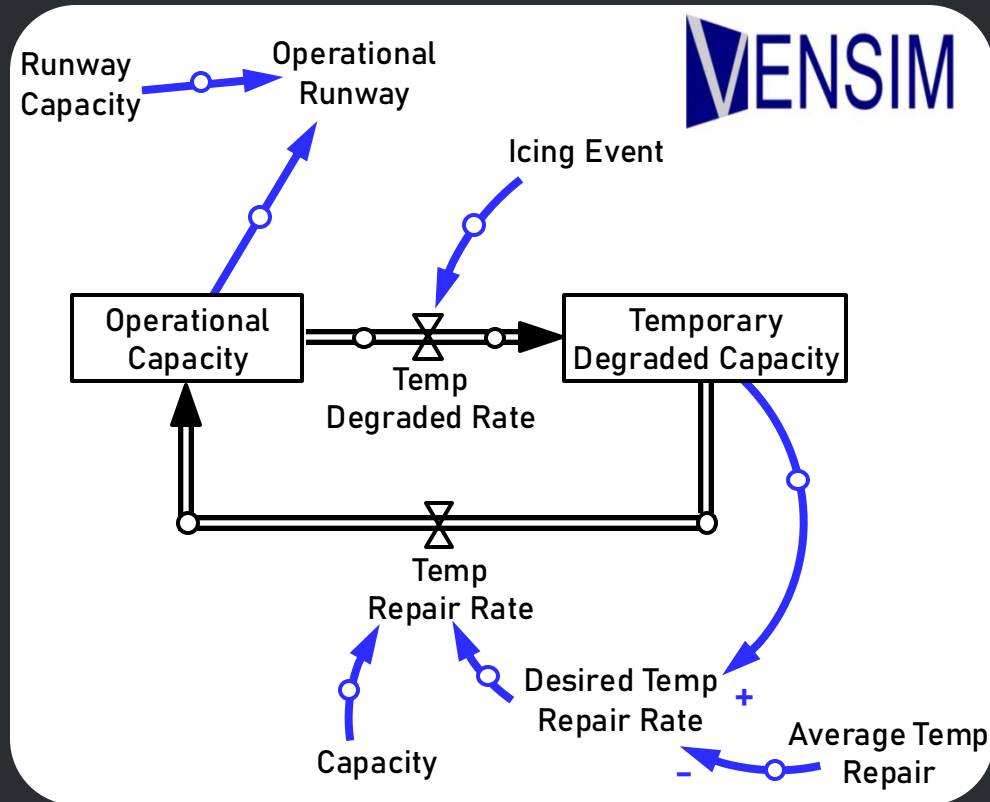


- Improved AGV simulation installation and usability by identifying and addressing system operator challenges
- Discovered effects of simulated sensor attenuation → AGV performed better under rain and fog conditions

Read more about this project at the following link: [https://www.ieworldconference.org/content/WP2024/Papers/GDRKMCC24\\_28.pdf](https://www.ieworldconference.org/content/WP2024/Papers/GDRKMCC24_28.pdf)

# Modeling Cold Region Installation Resilience

How can installations enhance the resilience & recovery of critical infrastructure in extreme environments?



## Methodology

- Reviewed data from ERDC and FEMA's *HAZUS Earthquake Model Technical Manual*
- Developed a **systems dynamics model** to analyze recovery times from earthquakes and icing events on critical infrastructure on Fort Wainwright, Alaska.

## Results

- Identified vulnerabilities in two mission-essential functions: transportation and power systems.
- Revealed 2<sup>nd</sup>-order effects not captured in traditional analysis
- Informed policy recommendations to mitigate risk

Read more about this project at the following link: [https://www.ieworldconference.org/content/WP2025/Papers/GDRKMCC25\\_20.pdf](https://www.ieworldconference.org/content/WP2025/Papers/GDRKMCC25_20.pdf)