

Cloud Phase: Federated Learning & Policy Training

- Physics-Informed Neural ODEs
- Multi-Agent RL Training

- Federated Aggregation
- Transfer Learning

Edge Phase: Real-Time Inference (<10ms)

- Bump-in-the-Wire HW
- ONNX Runtime

- Control Barrier Functions
- Safety Enforcement

MAS Phase: Distributed Coordination

- Primary (ms): Frequency
- Secondary (s): Restoration

- Tertiary (min): Optimization
- GNN-ADMM Acceleration