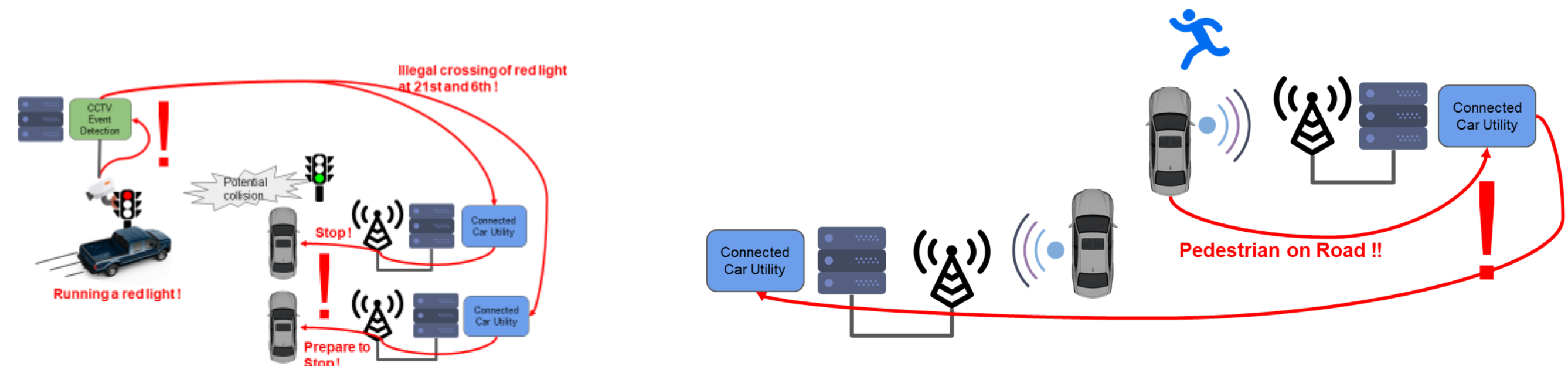


Elevating the Edge to be a Peer of the Cloud

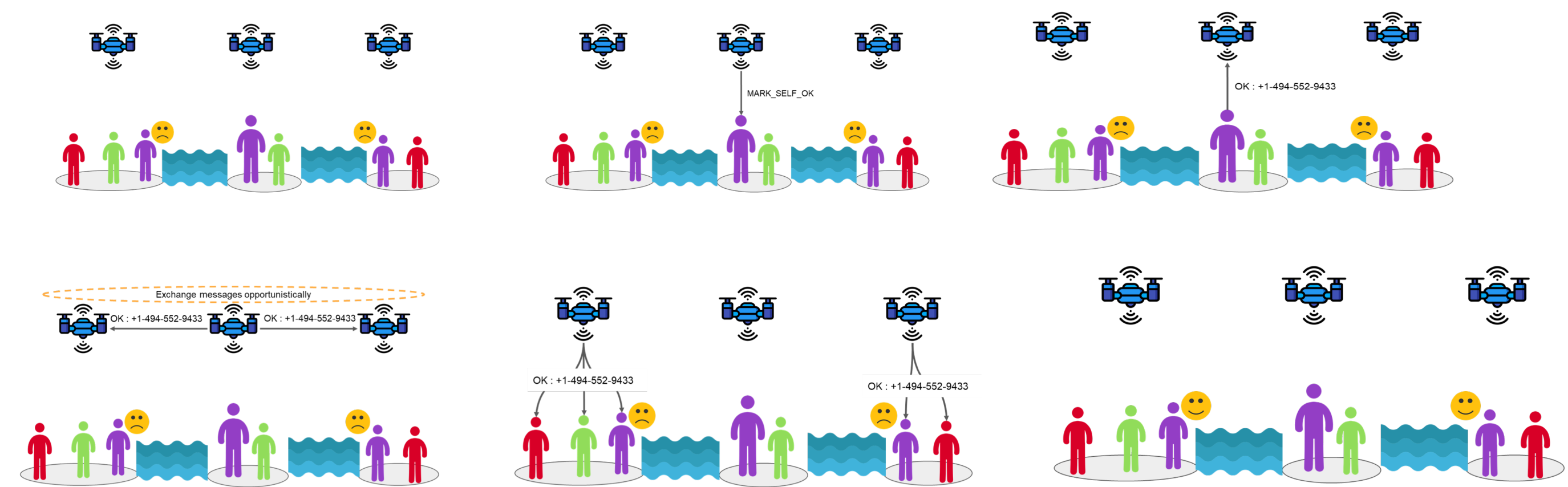
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 Embedded Pervasive Lab, Georgia Tech

- ✗ Edge as slave of the Cloud -> heavily dependent on cloud-based backends, I.e. data management.
- ✓ Edge as Peer of the Cloud -> self-manageability, fault-tolerance and the illusion of infinite resources.

- Why $e = \text{cloud}$? -> Horizontal interactions among edge nodes essential (connected vehicles)

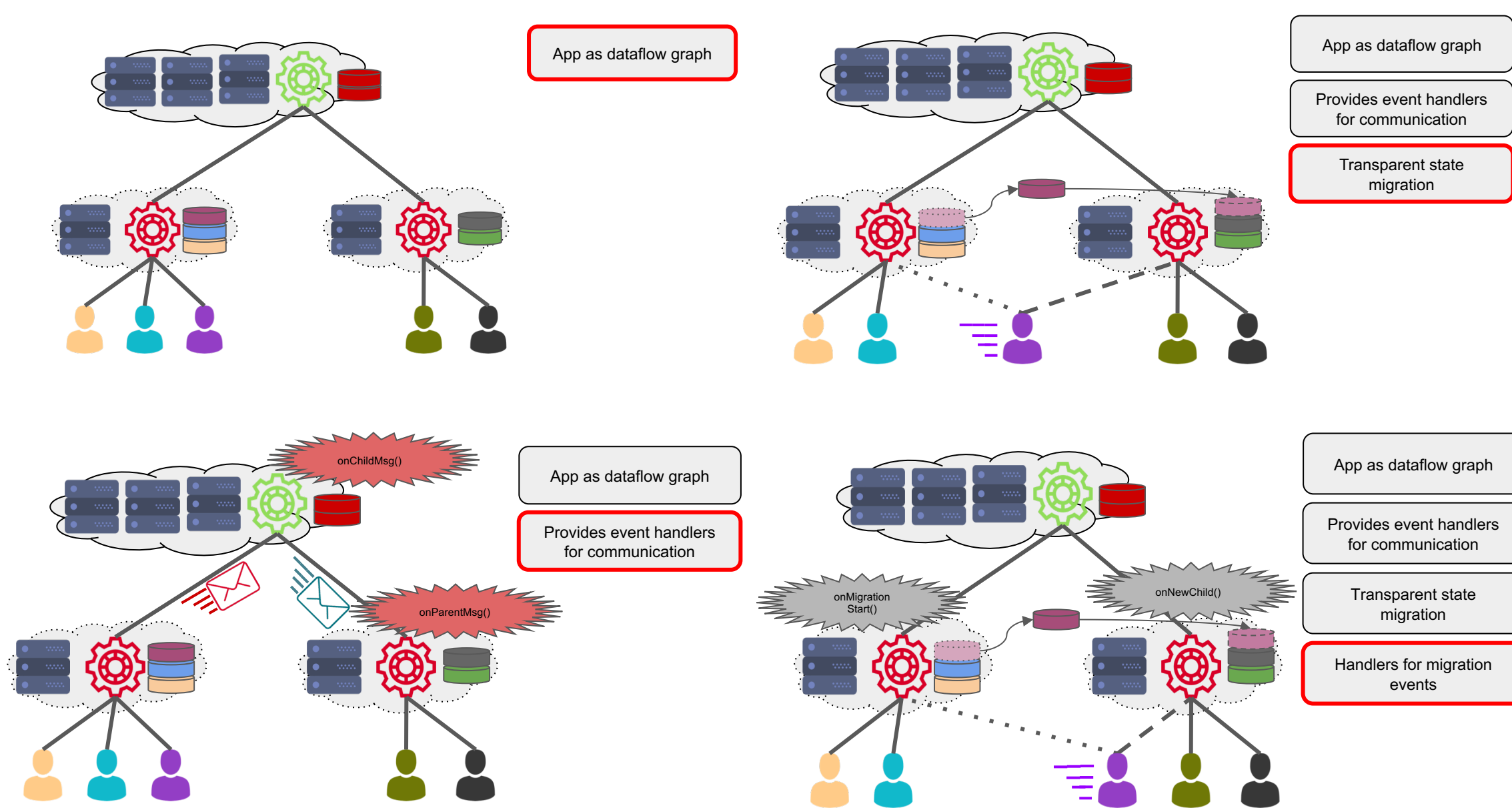


- Why $e = \text{cloud}$? -> Autonomy of edge (disaster recovery)

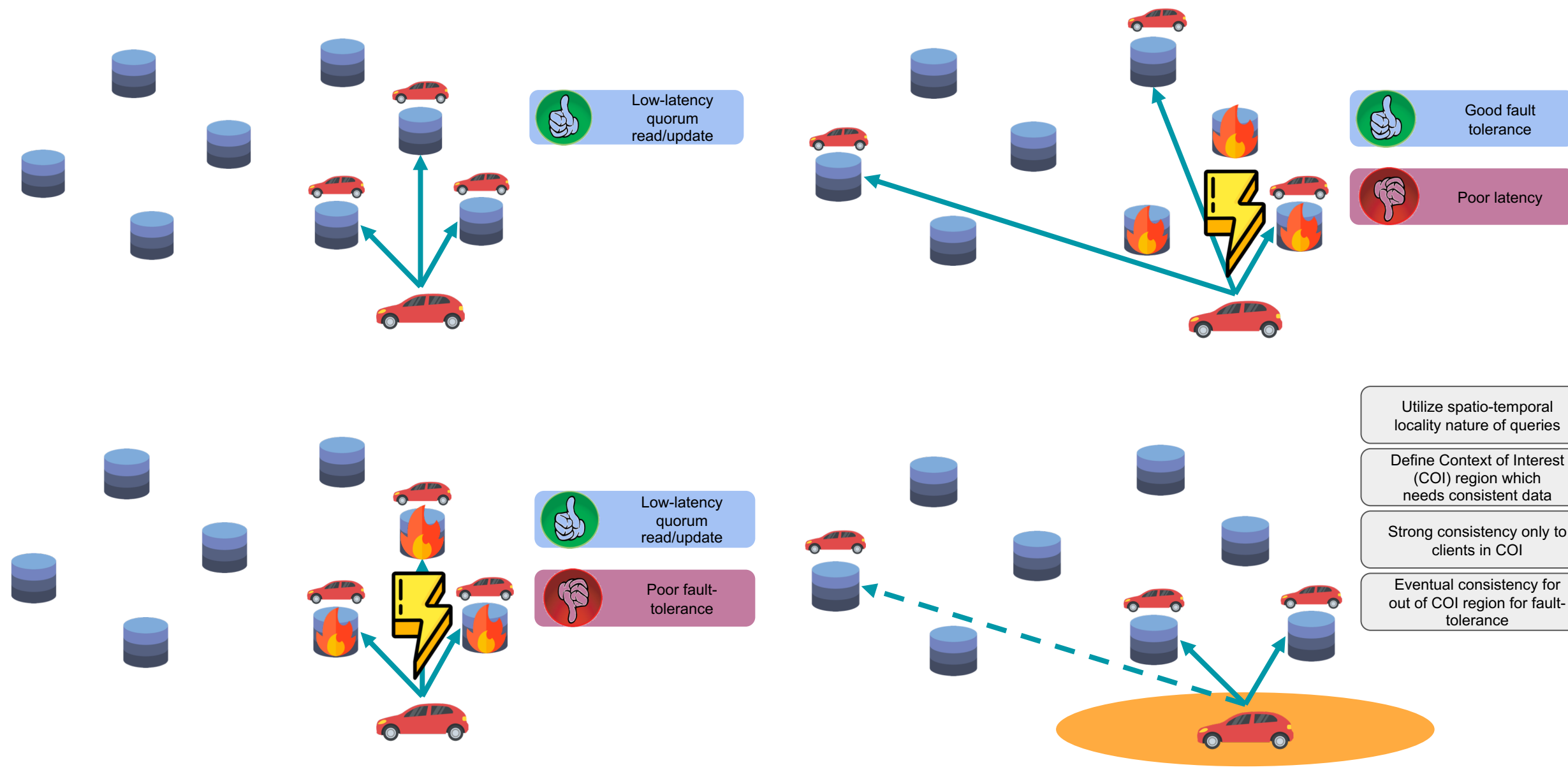


- Challenges for making $e = \text{cloud}$
 - Need for powerful frameworks akin to the Cloud at the edge
 - Geo-distributed data replication and consistency models
 - Rapid deployment of application components, multi-tenancy, and elasticity at the edge

Foglets: Geo-distributed programming model



FogStore: Replication: Consistency/Latency tradeoff



Social sensing: Applications using Autonomous Edge

