

Accelerating Autonomy

RTI Coffee Chat

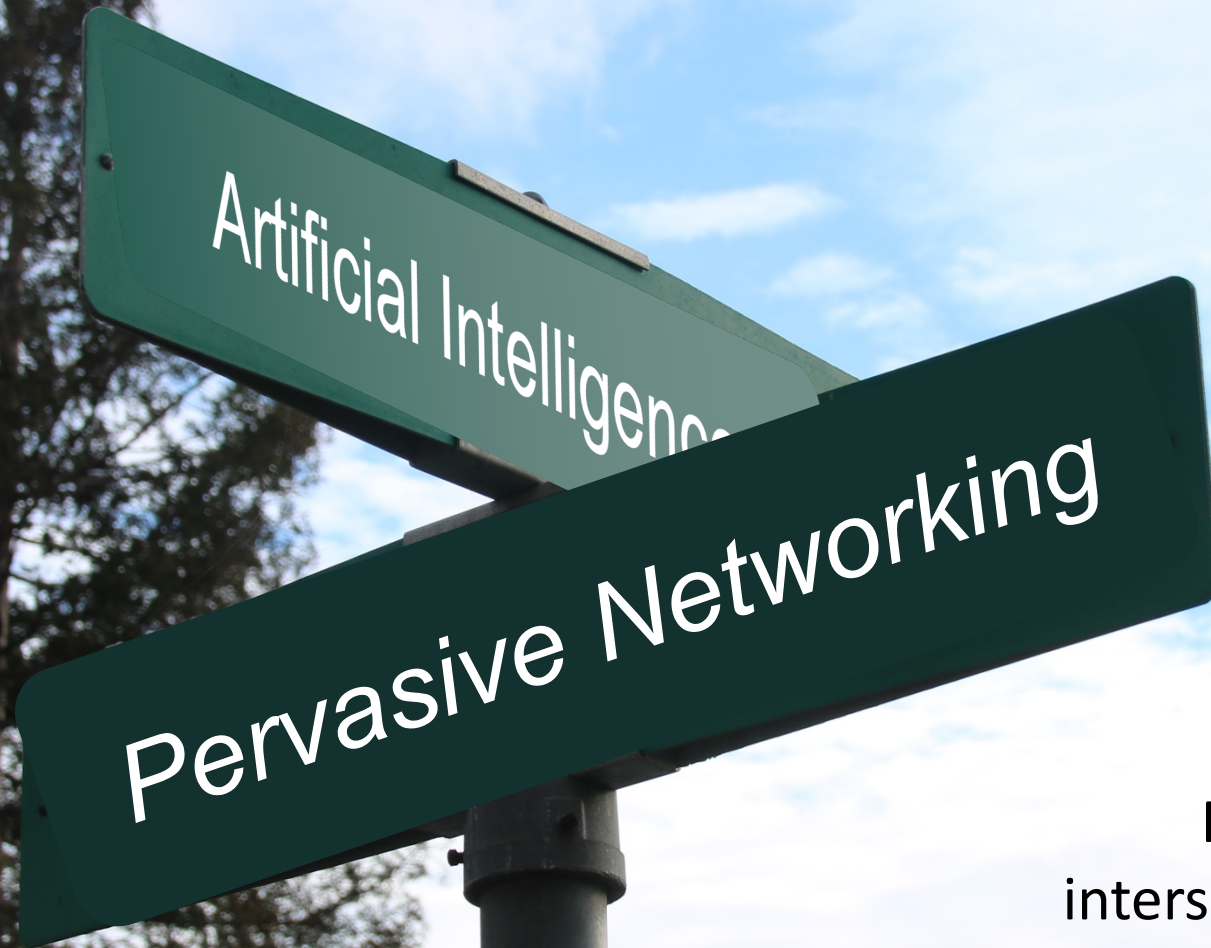
Stan Schneider, PhD CEO

Rajive Joshi, PhD Principal Solution Architect, Autonomous Systems

Why RTI? To Enable Smart Machines



By enabling a new generation of intelligent distributed systems, RTI boldly seeks to transform entire industries. We particularly seek applications that promote a sustainable, safe, green, and healthy planet.



RTI lives at the intersection of functional artificial intelligence and pervasive networkingSM

Who is RTI?

- RTI is the #1 software framework for smart machines and real-world systems
 - Focus on autonomy
 - 1500+ designs, many real-world programs across industries
 - 500+ research programs
- HQs in Silicon Valley and Spain with worldwide offices

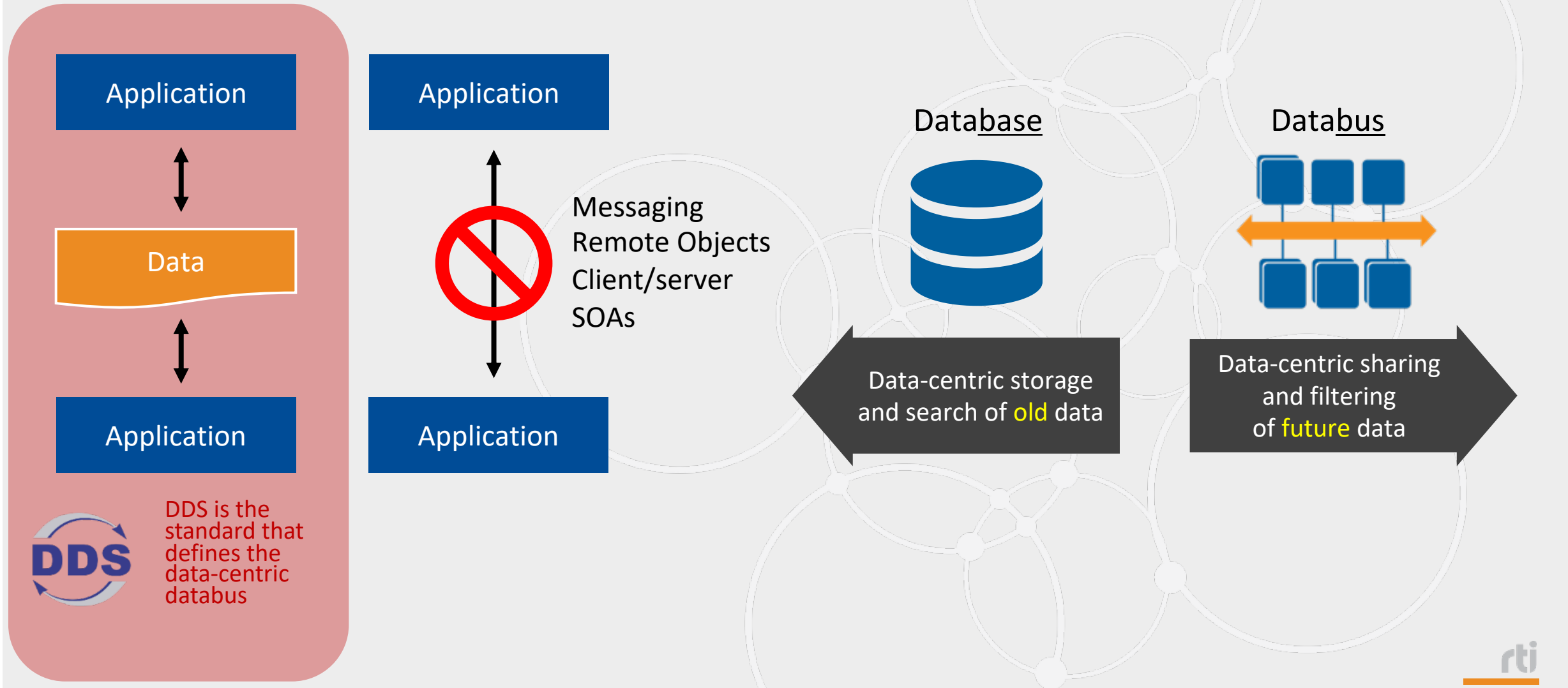


200+ RTI Autonomous Vehicle Programs

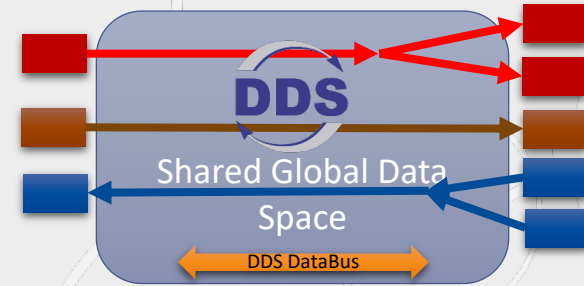
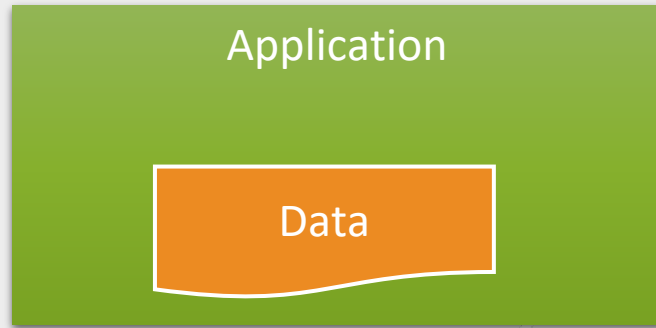
- 50+ commercial systems
 - 10+ Passenger vehicles
 - 10+ EV startups
 - 5+ Software platforms
 - 8+ Trucks, mining vehicles, forklifts
 - 2 Flying taxi services
 - 2 Hyperloop & other
 - 2+ Autonomous ships
 - 2+ Underwater robots
- 100+ defense systems (land, sea, air)
- 75+ research programs (companies, universities, etc.)



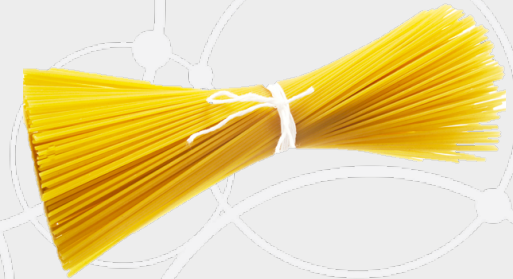
Design the System Around the Data



Why Does Data Centricity Matter?



"Data Everywhere" **Sharing**



"Data Any Place/Time/Flow" **Decoupling**

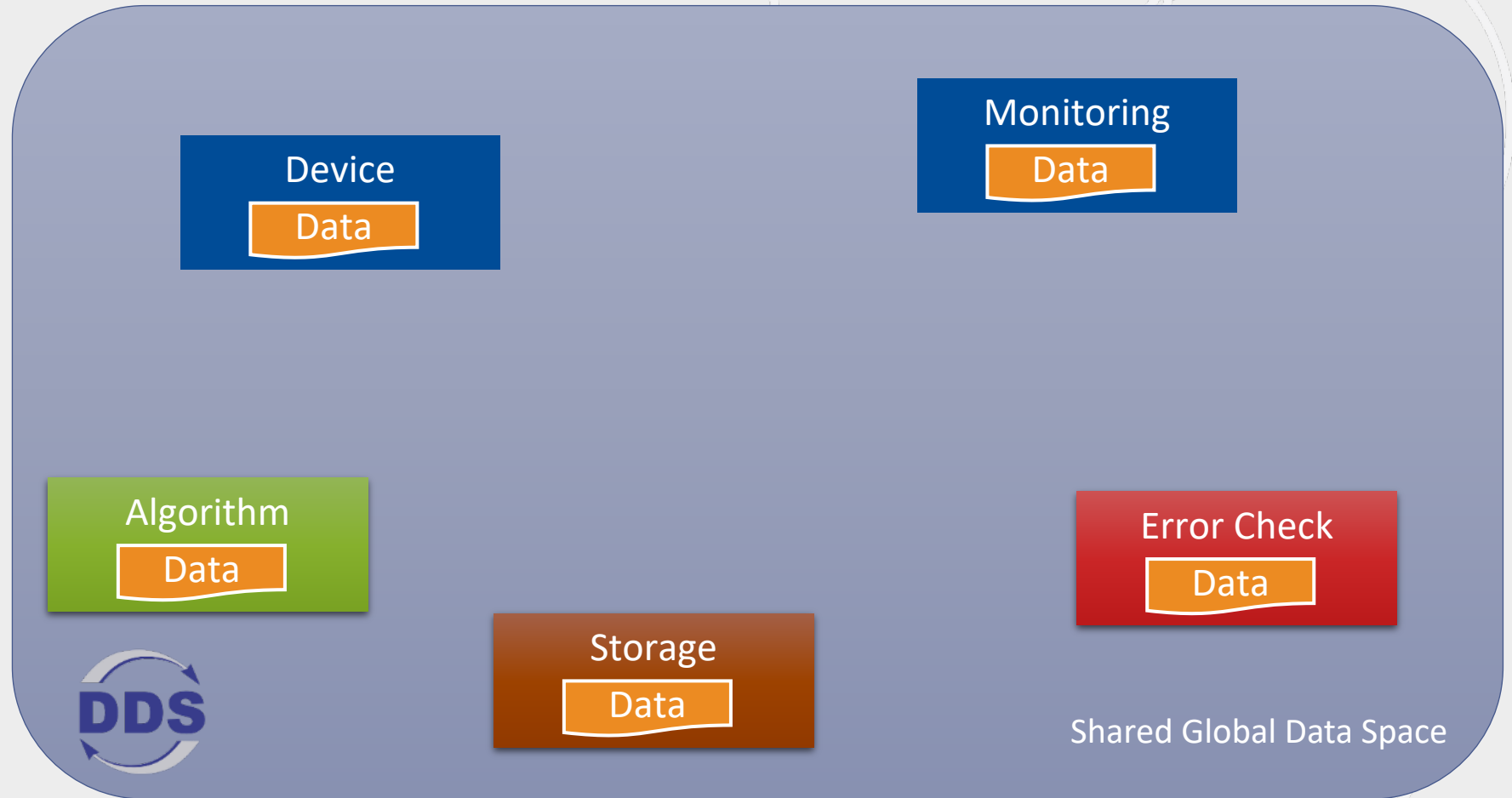
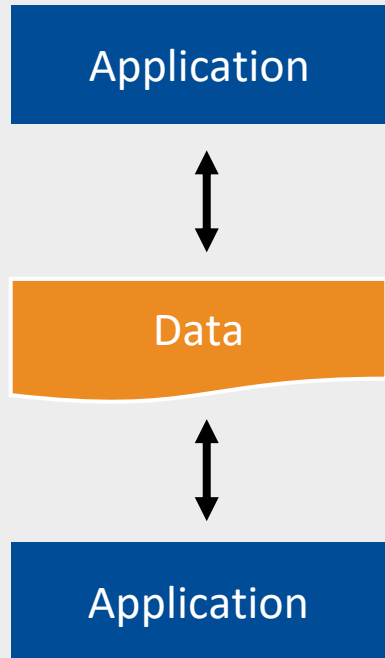
- Logically puts all data "inside" every application
- Apps read or write like local memory
- With full control over timing, reliability, filtering, security



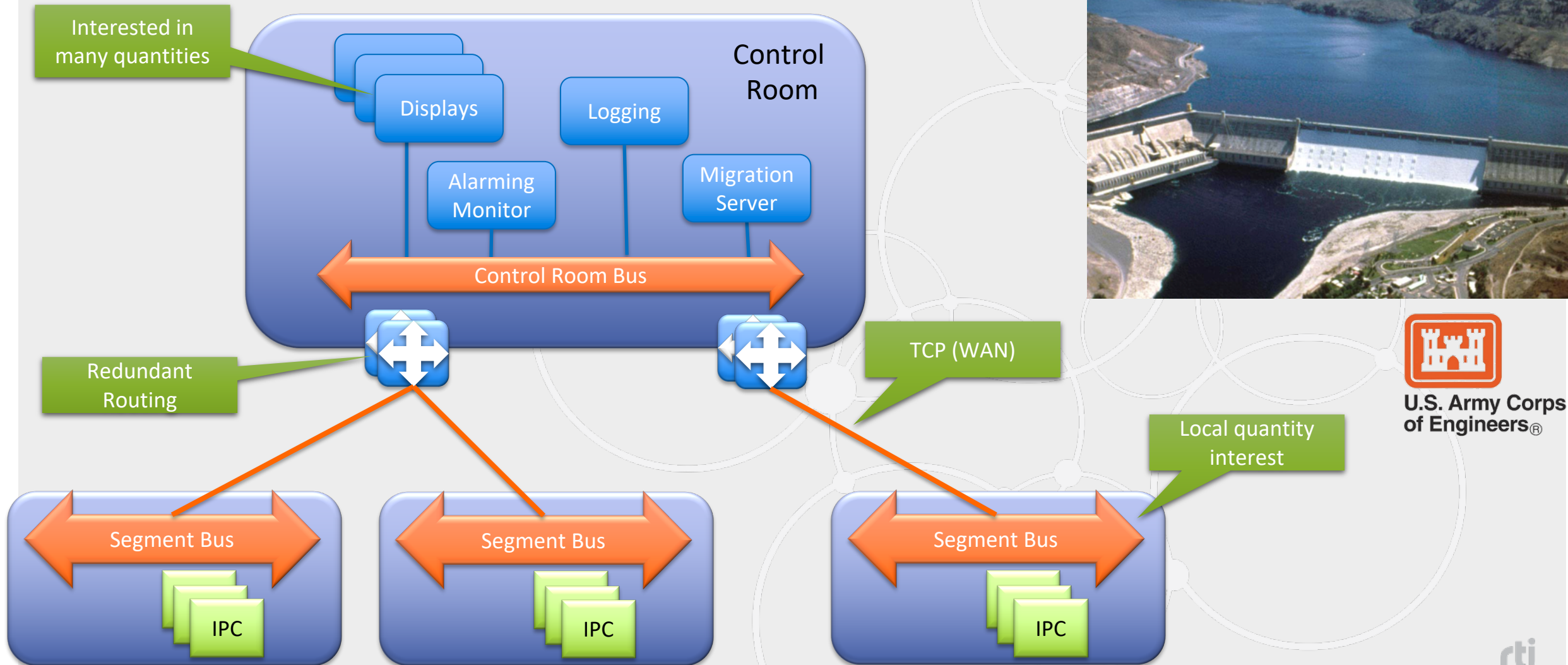
***Your Systems.
Working as One.***



Data Centricity Makes Mobility Transparent



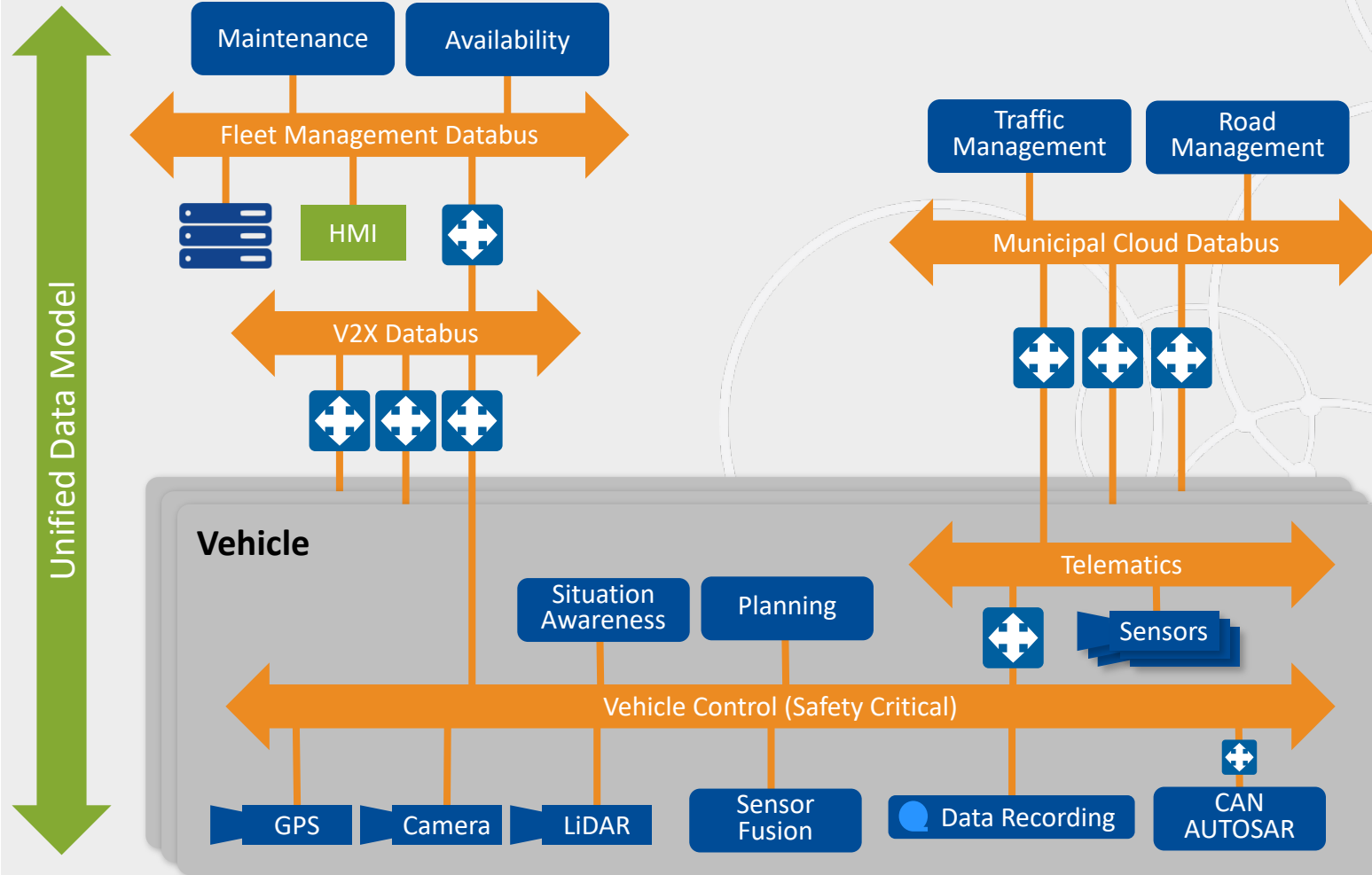
Data Centricity Enables Extreme Availability



U.S. Army Corps of Engineers®

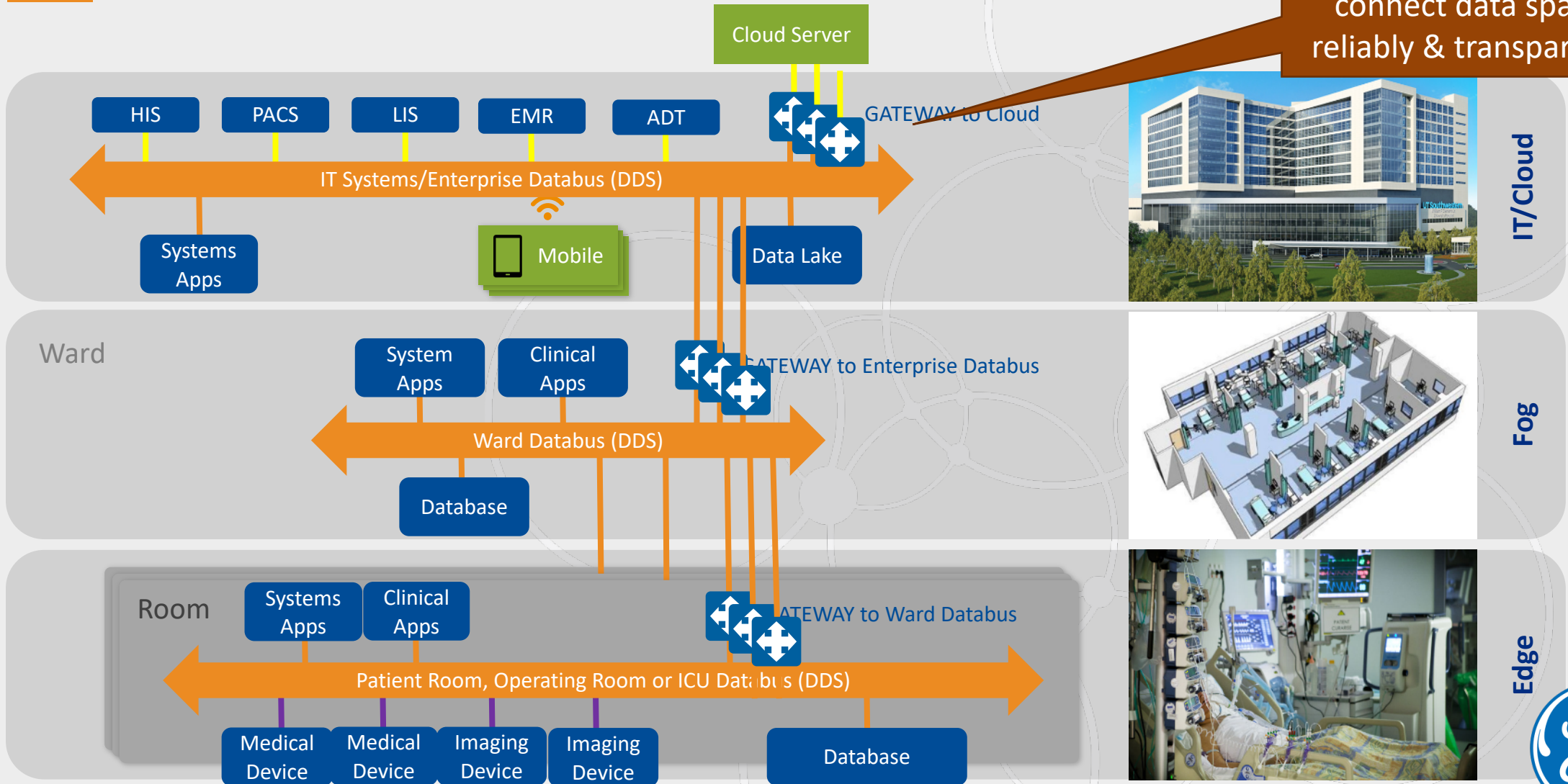


Data Centricity Shares Data End-to-End

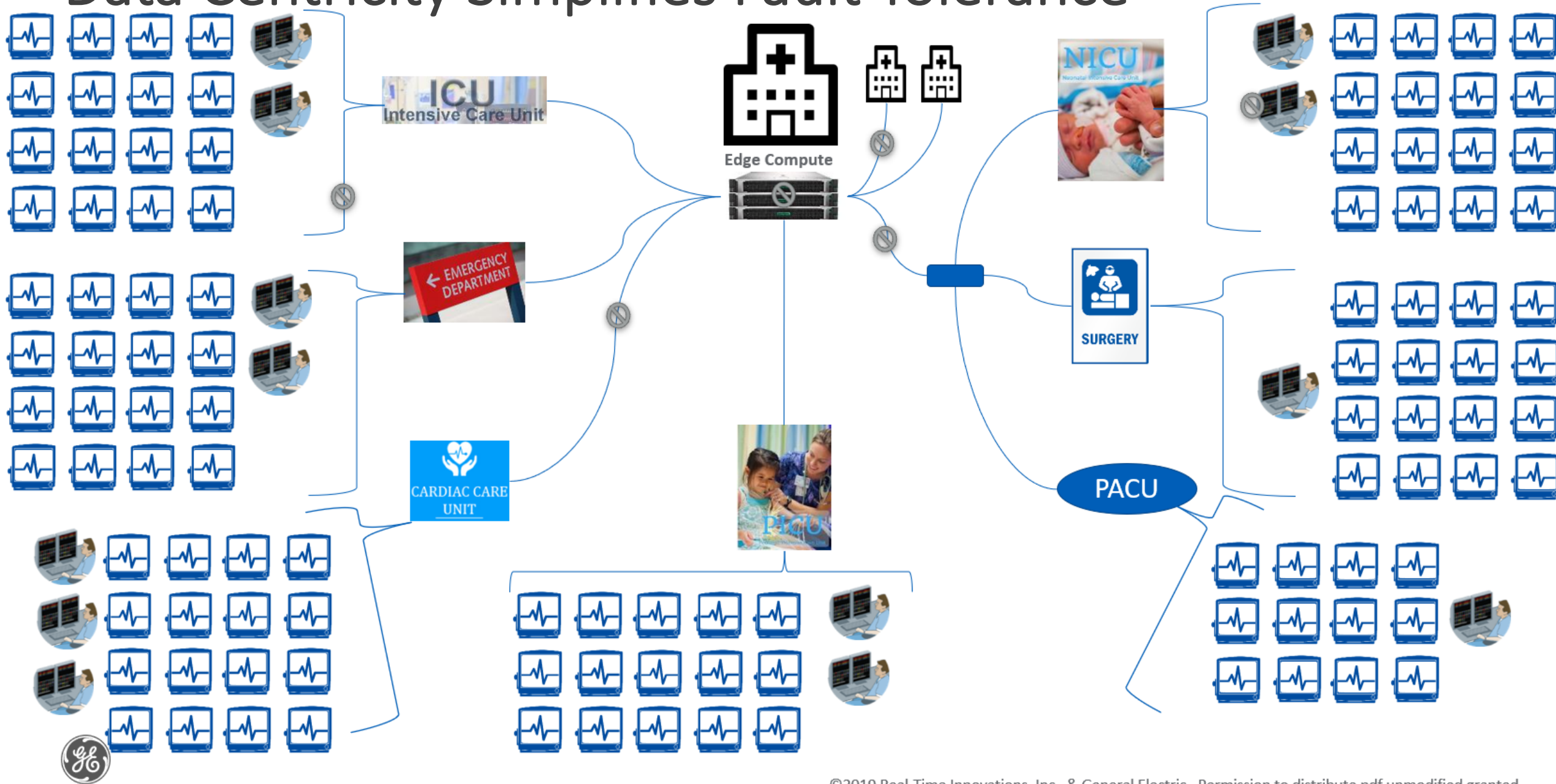


Data Centricity Scales

Unified Data Model

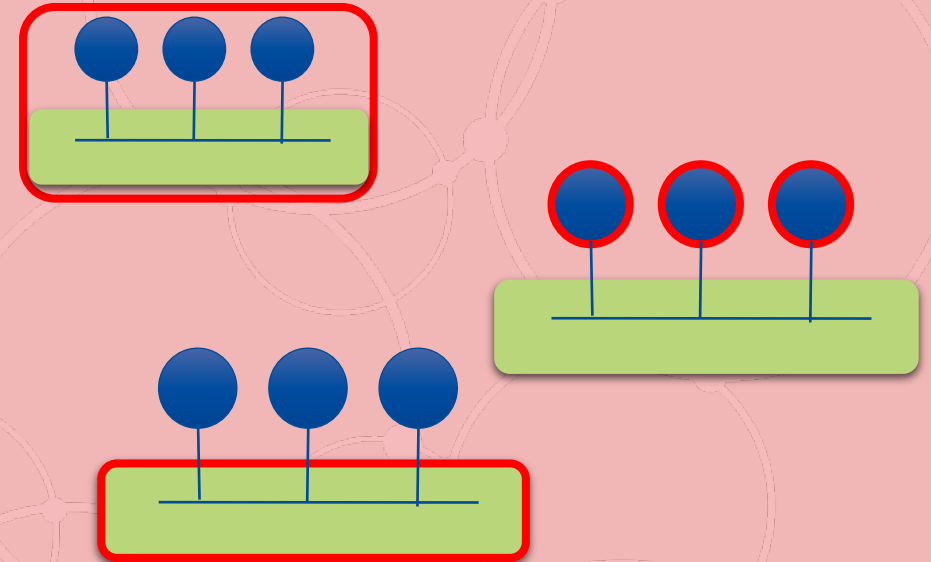


Data Centricity Simplifies Fault Tolerance



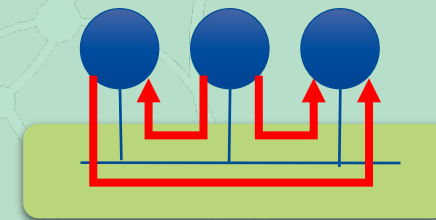
Data Centricity Allows *Data Defense*

- System edge
- Host
 - Machine/OS/Applications/Files
- Network transport
 - Layer 2-3 “pipe” security
 - Layer 4-5 “session” security



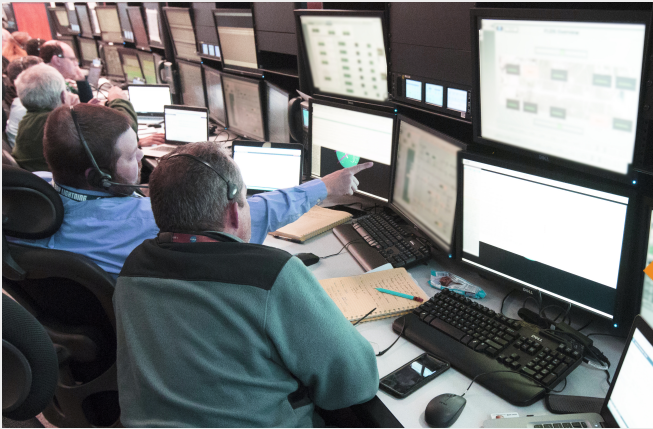
Important, “bolted on”, not enough

- DDS: Dataflow Security
 - Control *application interaction*
 - Secures the data itself; no API!
 - Independent of transport, OS, chip



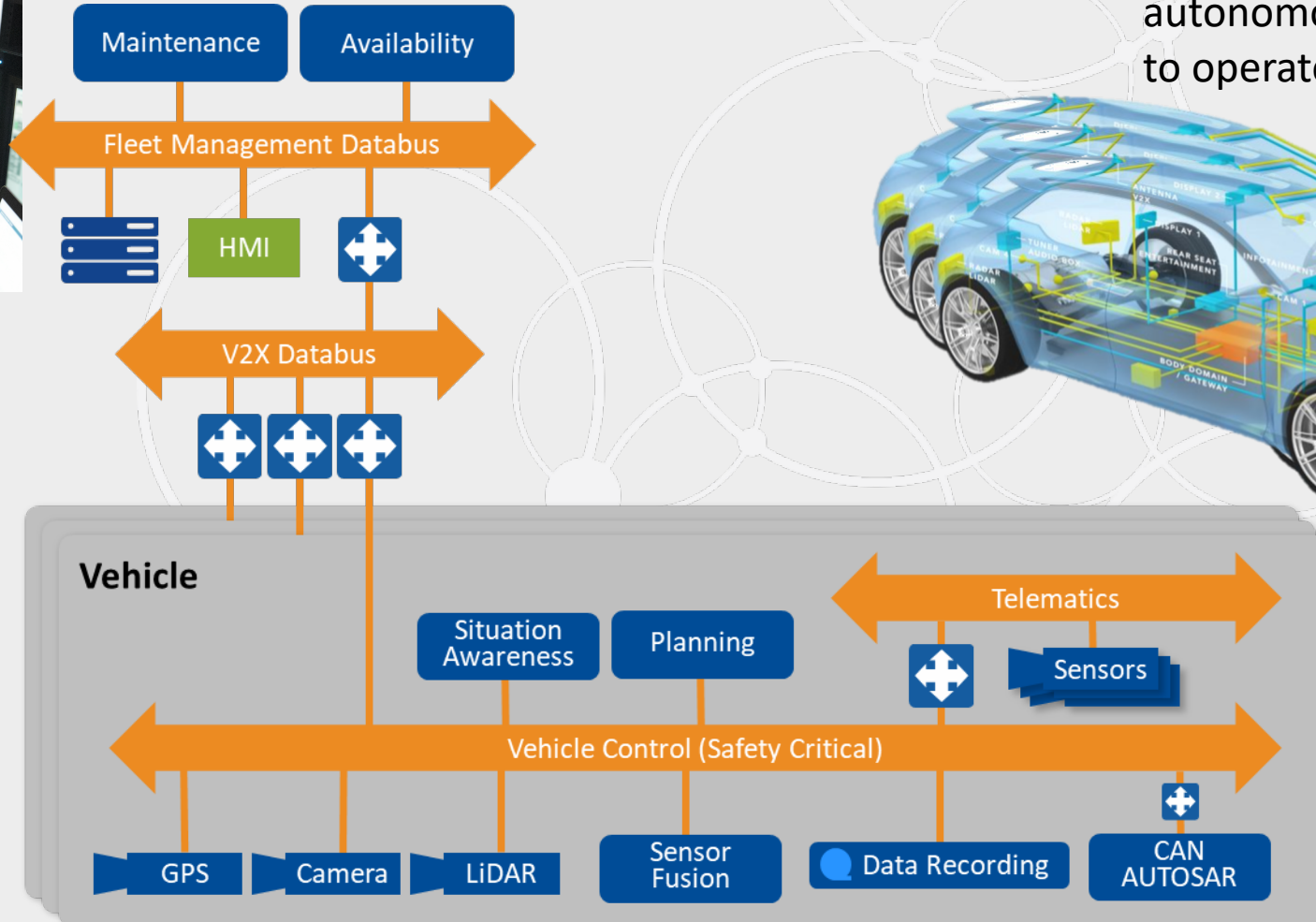
Perfect match to architecture: no code!

Solution: Connect Control Room to Vehicle

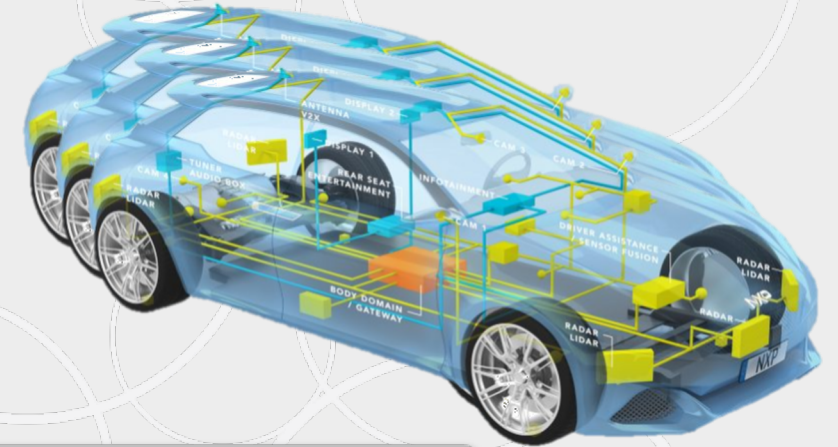


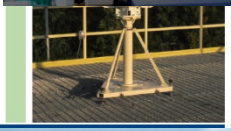
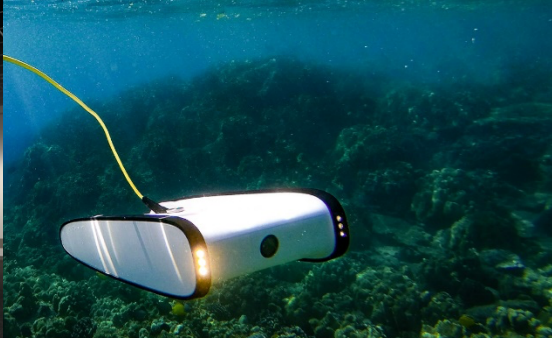
Connext operates control rooms for real-time monitoring

Connext integrates multiple standards and ecosystems



Connext delivers the data autonomous vehicles need to operate





Connect!!



- Contact

stan@rti.com

@RTIStan

LinkedIn: [Stan Schneider](#)

<https://www.linkedin.com/in/stan-schneider-102466/>

- Bio

- CEO Real-Time Innovations, Inc.
- IIC Steering Committee Vice Chair
- Advisory Board, IoT SWC
- Top-25 Global IIoT Influencer
- PhD, EE/CS, Stanford

