



CommandRESPONSE: An Open Source Instantiation of an Event-Driven and Services-Based Architecture for Net-Centric Warfare and Public Safety Applications

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The Vision: Net-Centric Response

- **No vendor should own the infrastructure.**
- **Complete open source technology stack.**
- **Enterprise-class scalability**
- **‘Small smart pieces loosely coupled – many pieces/one view’**
- **XML-Web Services-Composite Processes-SOA**
- **Address the hard issues:**
 - Shared information space (Pub/Sub)
 - Semantic integration (RDF/RDF-S/OWL/OWL-S)
 - Orchestration of web services (BPEL4WS)



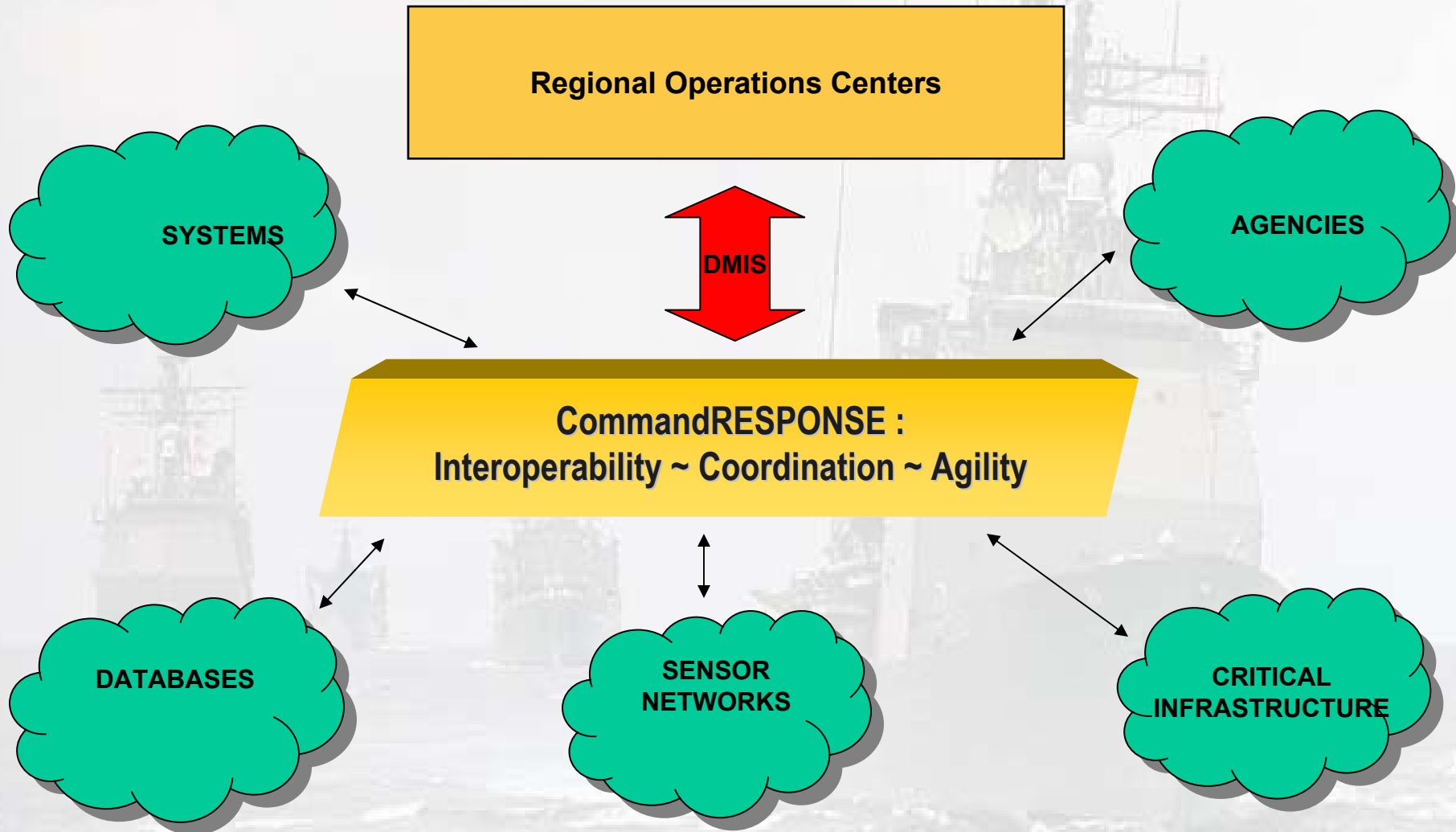
ODP Pilot – City of Chula Vista

Agility and Interoperability Reference Architecture

- **Attack on hazardous materials shipment**
 - Hazmat shipment enters Chula Vista jurisdiction
 - Positional tracking every two minutes
 - Events occur at border, waterfront and in city
 - Event correlation moves dashboard to yellow
 - Explosion sends plume into air
 - EOC runs plume dispersion and weather simulations
 - Affected geography identified and alert program launched to participating agencies and public
 - Secure wireless LAN established at P.O.P. bridging mis-matched LMR's and IP infrastructure
 - Police cruiser leaves LAN in pursuit but maintains connectivity across available protocols
- **Pilot Participants**
 - All City first responder agencies
 - Border Patrol
 - US Navy
 - SPAWAR
 - Coast Guard
 - Scripps Hospital
 - Sweetwater School District
 - Duke Energy
 - Private business
- **Lessons Learned**
 - It's about INTEROPERATION ... not INTEGRATION
 - First Responders desire simplistic user interfaces and rapid access to process-centric value components
 - Municipalities need incremental investment strategies and risk mitigation for current investments

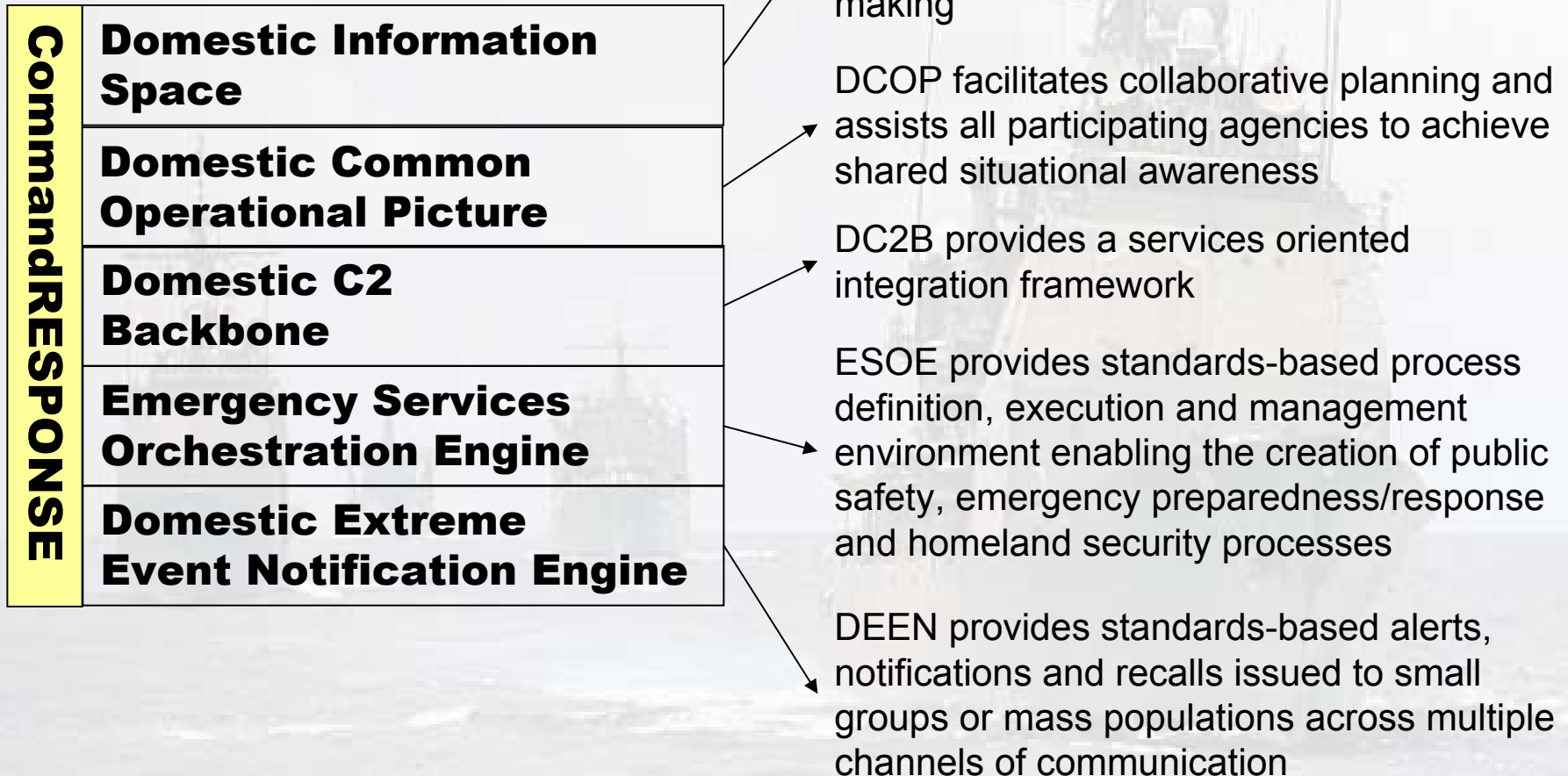


High Level System Architecture





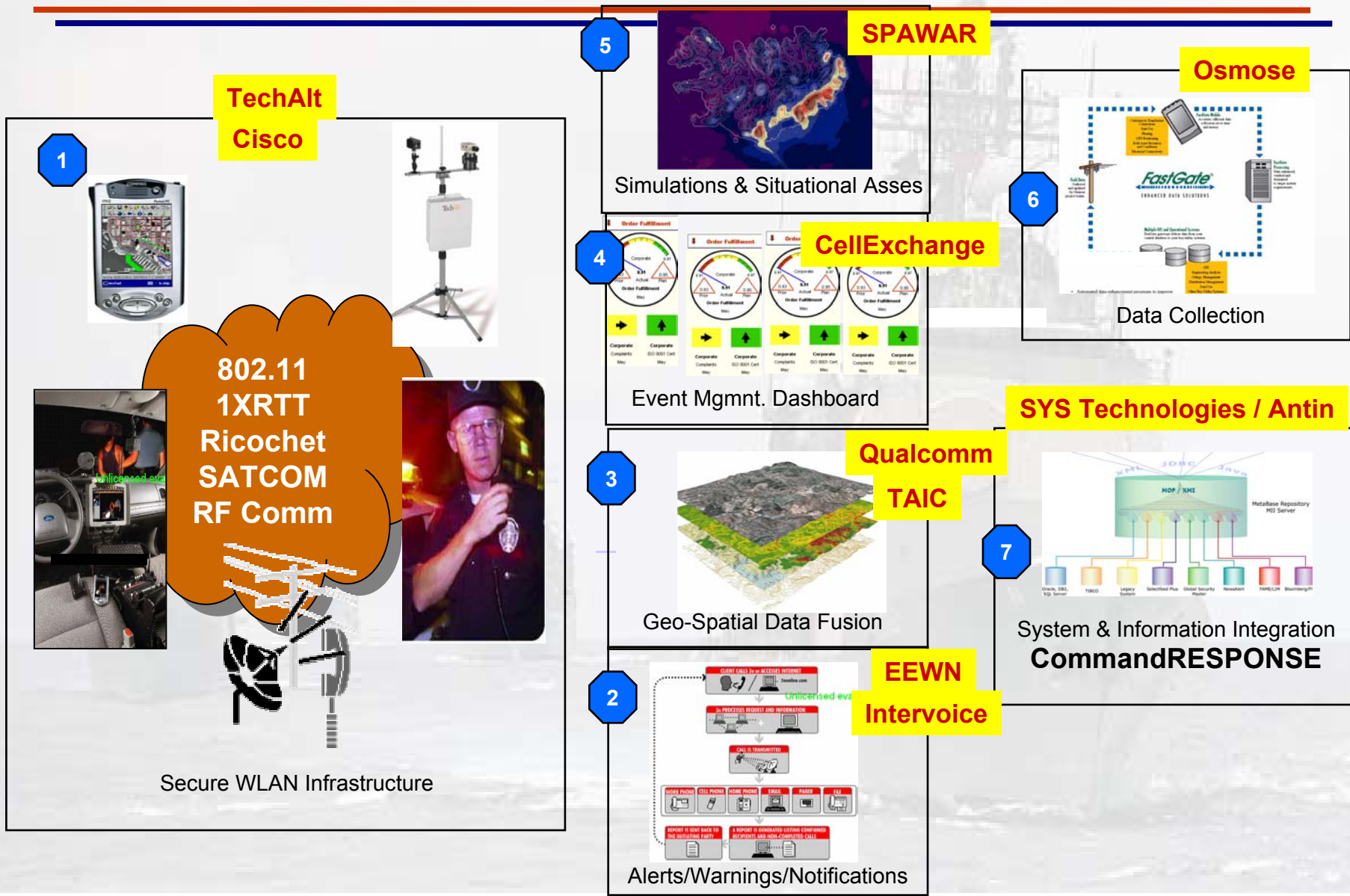
Addressing Domestic C4ISR





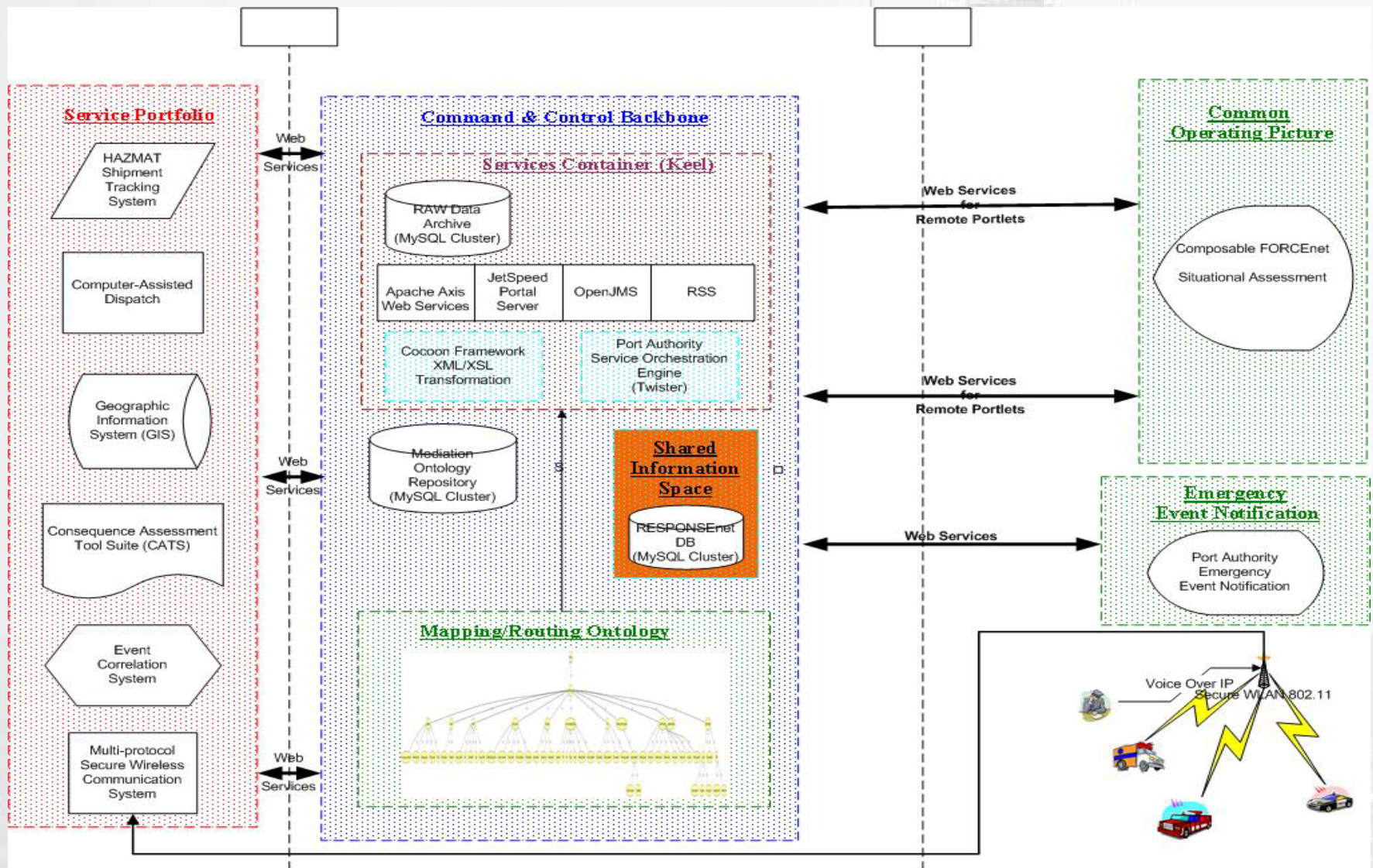
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Service-based Value Components

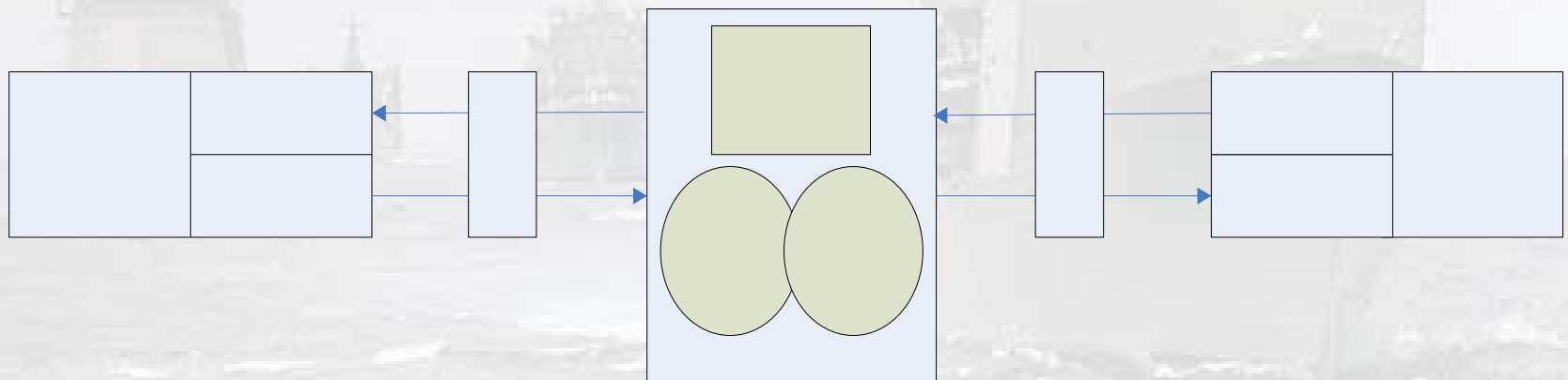
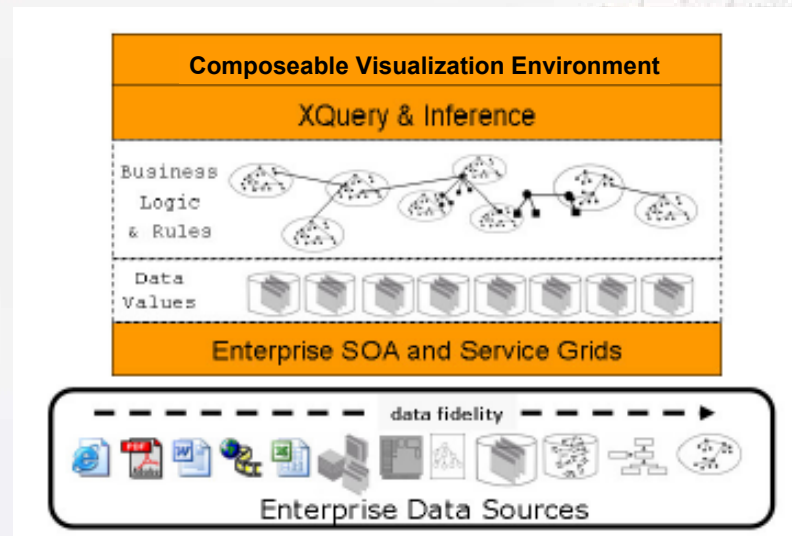




Pub/Sub Mediation Framework

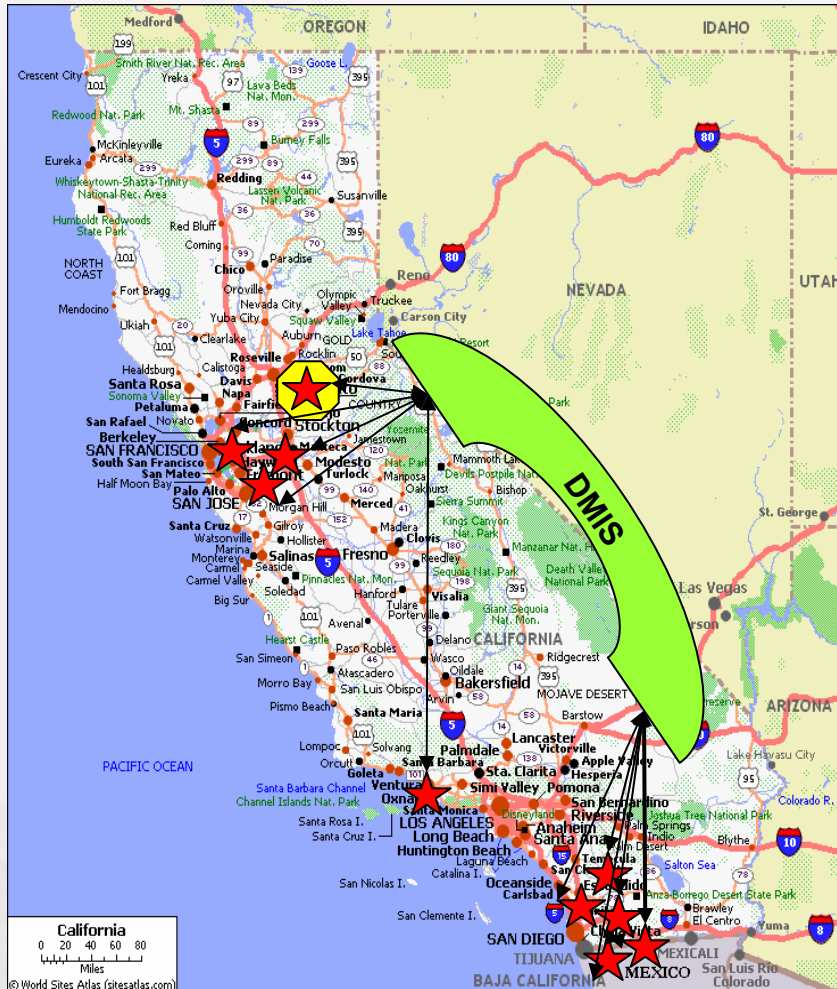


Semantic Solution





Extending CommandRESPONSE to GWOT Trident Warrior 06



- **FORCEnet Experimentation Venue – GWOT vignette**
- **In cooperation with California Governor's Office of Emergency Services**
 - Emergency Response Management Network
- **ERMN instances becomes key infrastructure in support of GWOT**
 - Links municipality instances with DHS/FEMA DMIS and DHS/S&T NIEMS
 - Provides interoperability between HLD, HLS and First Responders



Questions?

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