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## **C2ISR Sensor Fusion**

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## Why COTS for C2ISR Integration?

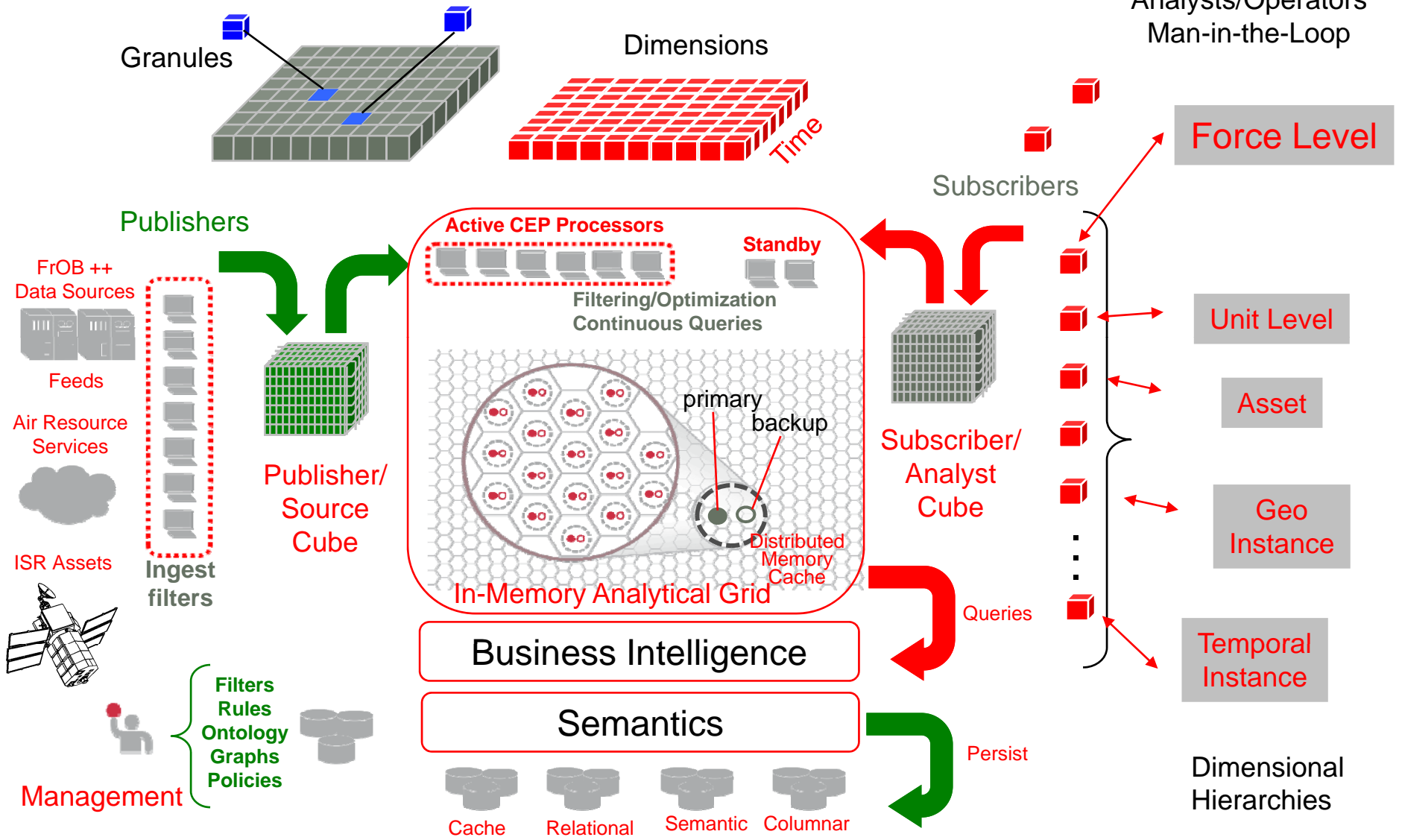
- Integration costs continue to increase
  - Major SOA platform vendors are accelerating innovation for in-memory data grids, compute grids, SaaS, and more
  - Data avalanche: 120TB/day for weather alone
  - Number and variety of sensors is increasing
  - Inherent limitations of network bandwidth
  - Goal: High-Speed Pub/Sub, Business Intelligence and Geospatial/Temporal enablement of the mid-tier
  - Requirements for COTS are numerous
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# In-Memory Analytical Data Grid for C2ISR




Analysts/Operators  
Man-in-the-Loop






## **An Event-Driven, In-Memory C2ISR Sensor Fusion System Needs...**

- DDS or other High-Speed Publish/Subscribe
  - Geospatial and temporal enablement of the mid-tier
  - Abstract data model
  - Streaming & In-memory analytics, business intelligence
  - Incremental bulk update, in-memory ETL
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## Challenges & Lessons Learned

- Government, especially FAA, DoD and Intelligence customers, leverage large data sets
  - Software companies need use cases, broad acceptance, to justify investment
  - DCGS legacy of proprietary/GOTS components resulted in balkanization and brittle upgrade paths
  - Growth path to private/trusted cloud for C2ISR
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## Additional Use Cases

- Cyber Network Defense (CND) & Cyber Network Attack (CNA) integration
  - Law Enforcement
  - BAMS
  - Numerous classified use cases
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