



**Program Executive Office
Command, Control, Communications,
Computers and Intelligence (PEO C4I)**

Moving Navy Command and Control into the Future

**30 January 2013
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Command and Control Systems (PMW-150)**

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***Information Dominance
Anytime, Anywhere...***





Bottom Line Up Front



Navy's Future C2 systems will be...

- **More complete**
 - Plan, Execute, Monitor and Assess Navy missions
 - Provide relevant information for decision making
 - Enable commanders to make better, faster decisions
- **More collaborative**
 - Across warfare areas
 - Across echelons and mission partners (joint and multi-national)
- **More cohesive**
 - Fully integrated C2 decision support “apps”
 - Interoperable with ISR, IO, Cyber, combat systems, and combat support functions

Modern system architectures leveraging commercial technologies



Commanders Struggle to Perform C2 with Today's Systems



Key issues with lack of automation and lack of interoperability

- **Labor intensive, repetitive processes** to collect information for full situational awareness (SA)
- **Manual creation and maintenance of C2 artifacts** in PowerPoint, Excel, web-based file archives (SharePoint), and isolated mission-specific tools
- Current Navy C2 system answers only ***“who”*** and ***“where”***
- Future Navy C2 systems will address ***“what,” “how,” “when,” “what is,” “what was,” “what next,”*** and ***“what if”***



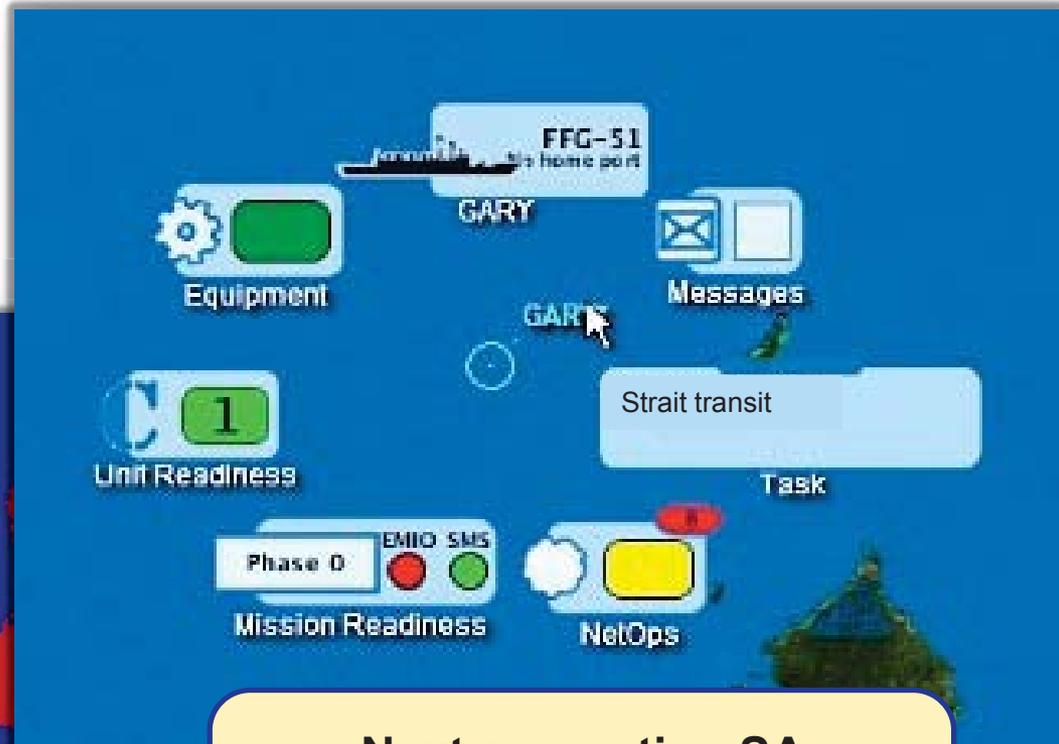
Enhancing SA with

“What, How, When, What Is, and What If” to Better Plan and Direct Navy Forces



Today

Legacy Systems provide
simple “Tracks on a Map”
Support SA Only



Next generation SA
enhanced with rapid-access
“*Information Halo*”

Future



Navy Doctrine Demands Integrated C2 Planning, Execution, & Assessment Tools



NTTP 3-32.2
Operational Assessment

Assess

CDR's Decision Cycle

NWP 3-32 Maritime Ops at the Operational Level of War

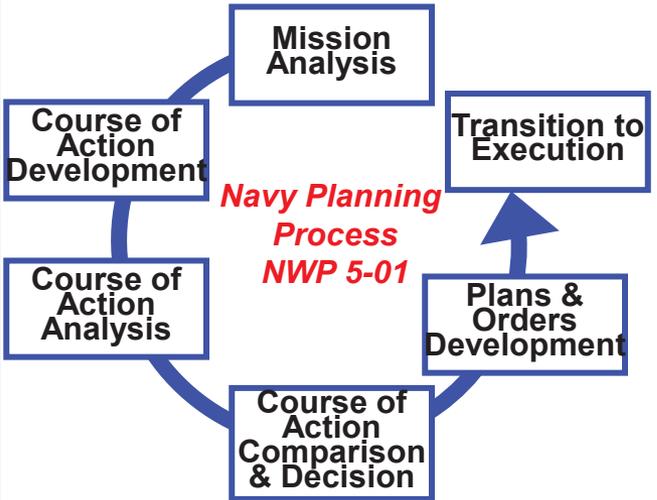
C2 POR Today:
"Tracks and Maps"

Plan

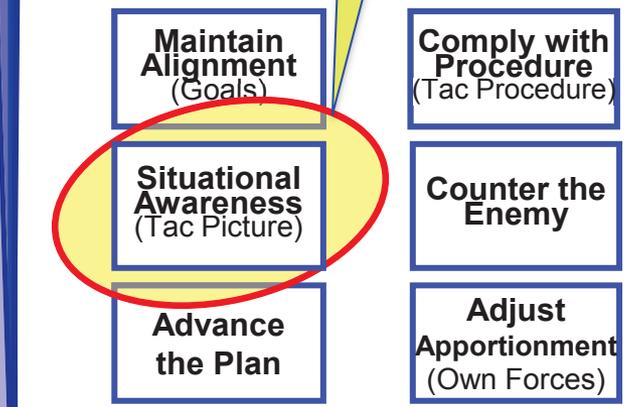
Monitor

Direct

PLANNING



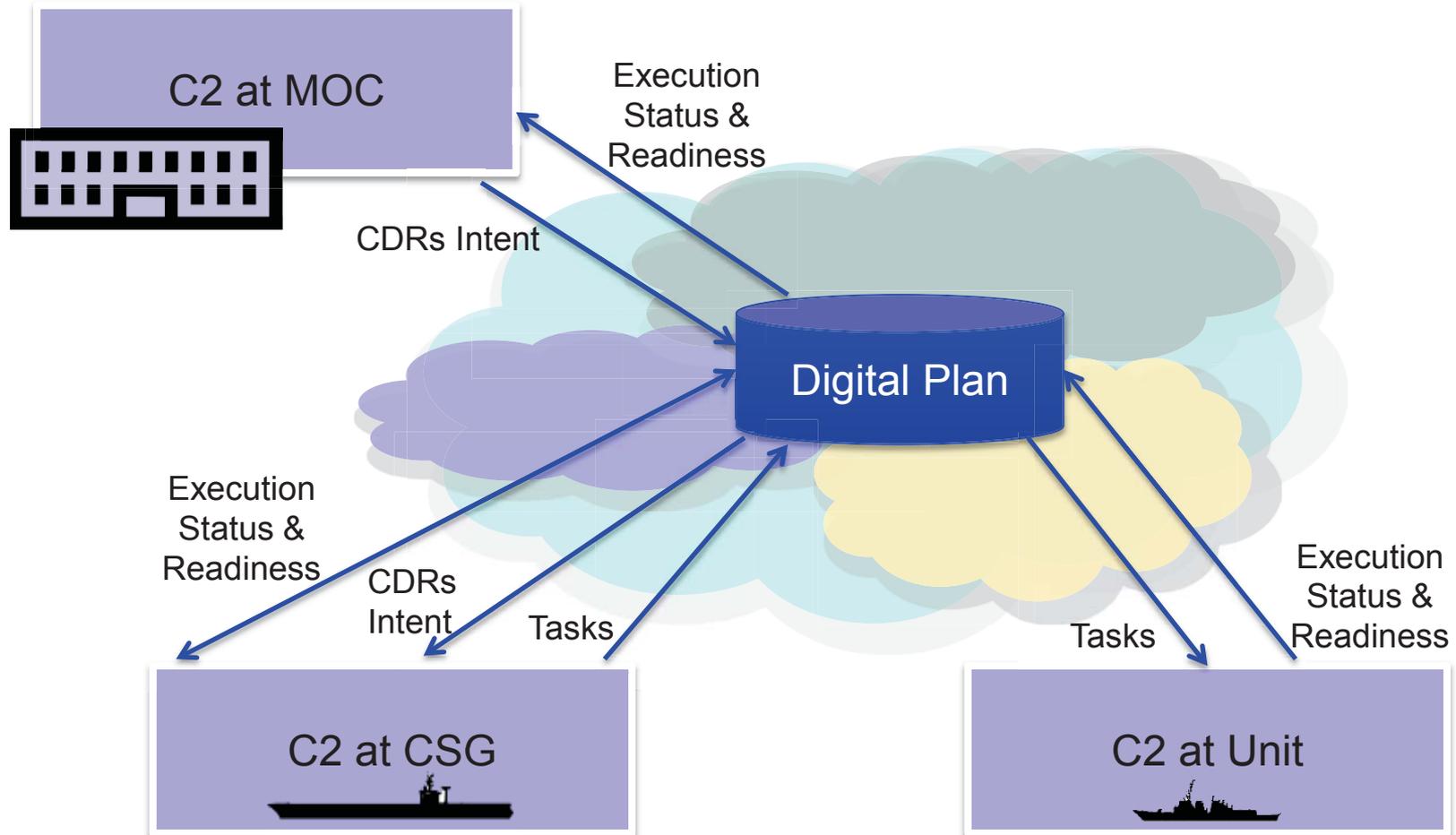
EXECUTING



Role of HHQ Commander
NWP 3-32 Maritime Ops at the Operational Level of War



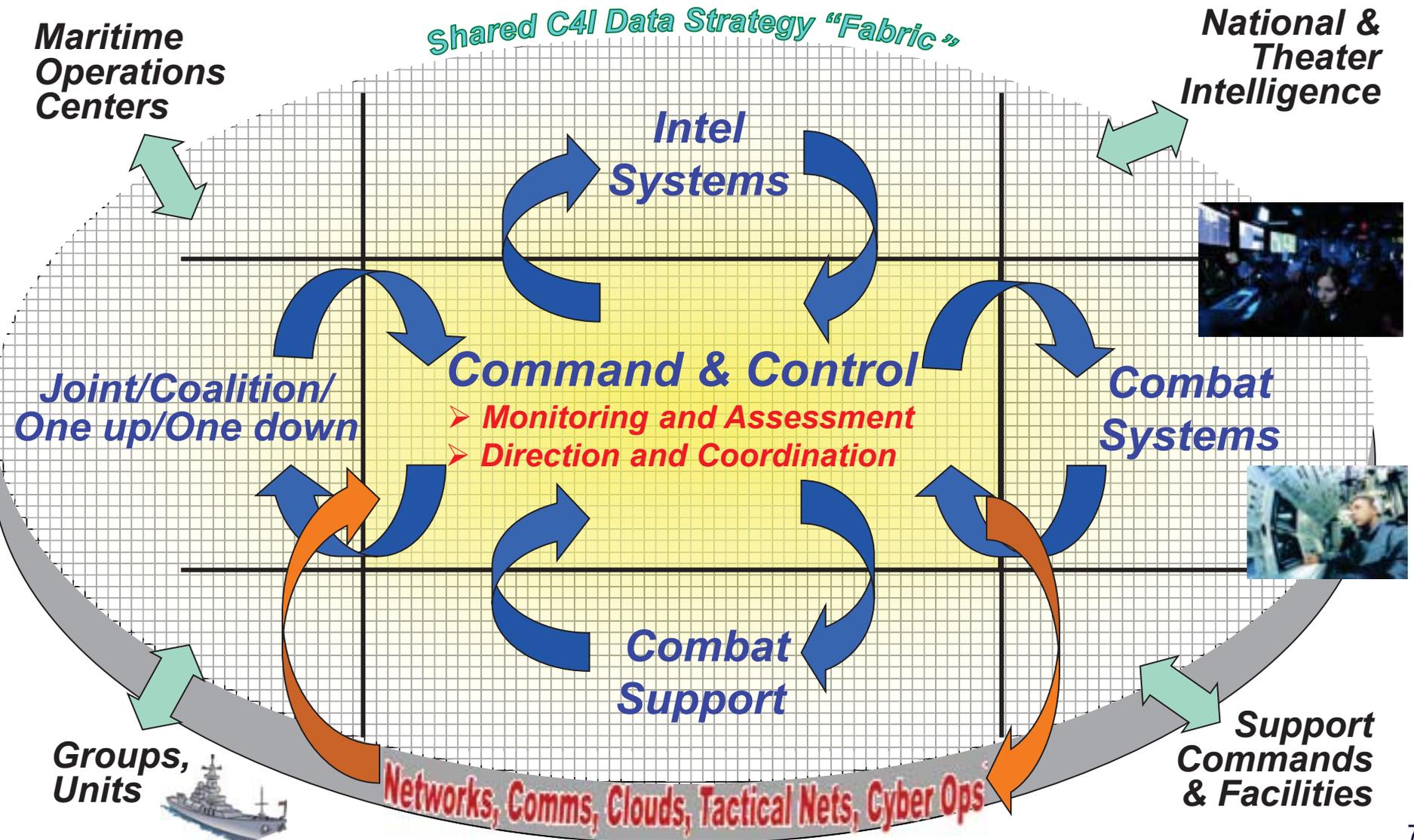
Cross-Echelon Collaborative Planning and Monitoring



Shared Digital Plans speed the Decision Cycles by enabling automated workflows, reuse, and context sharing

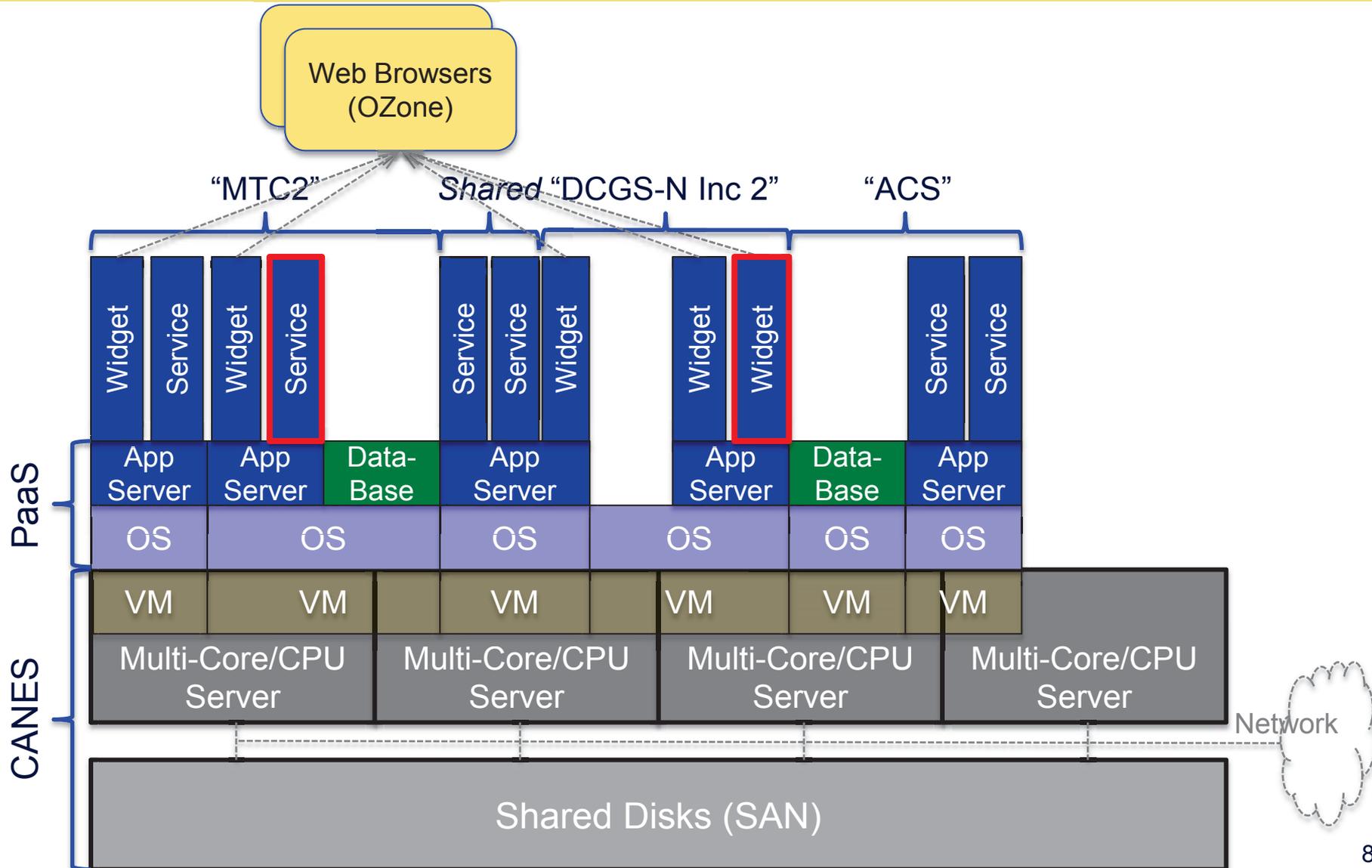


C2 System Relationships



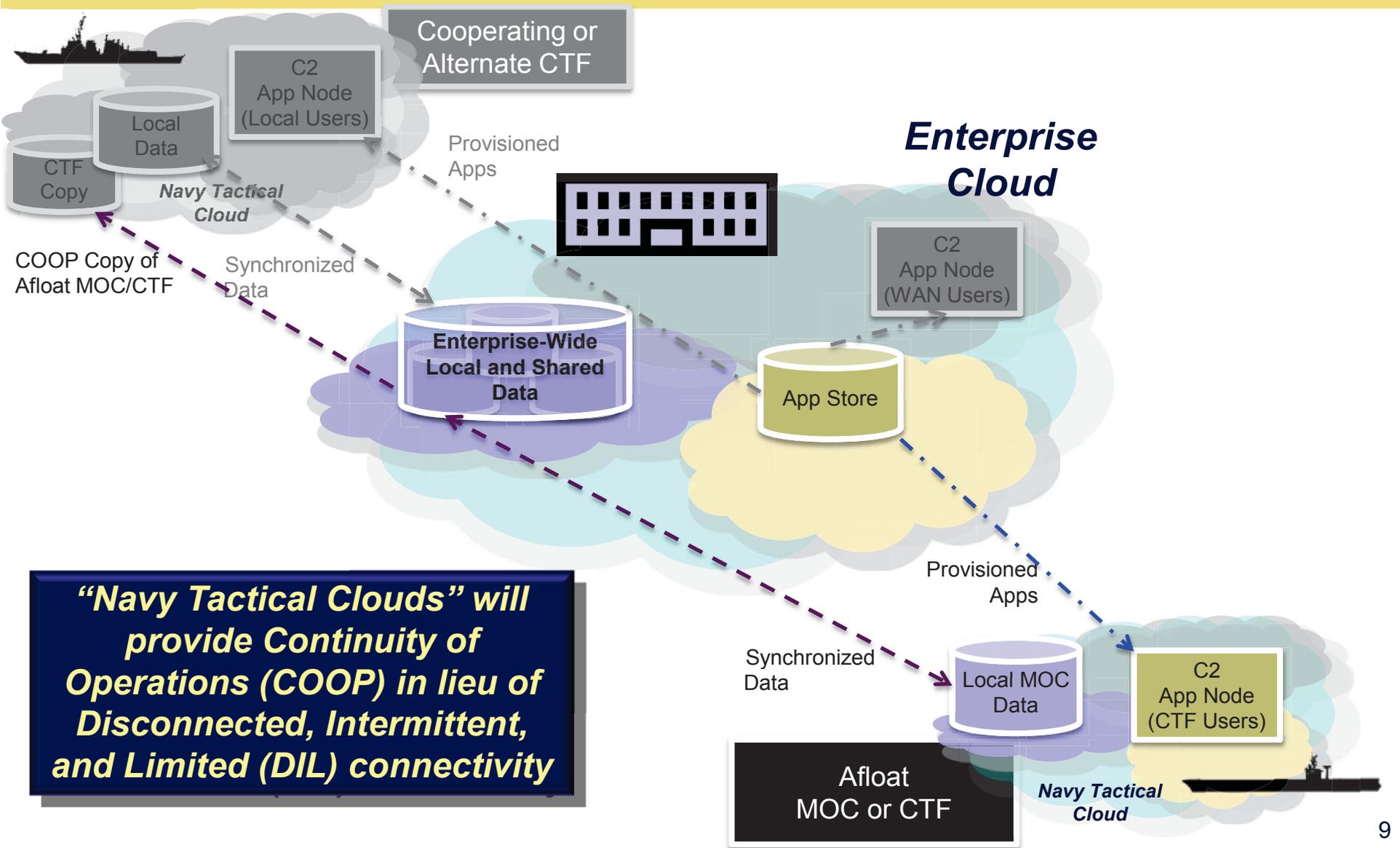


Leveraging Shared, Commercial-based “Platforms” to Focus on C2 Apps and Services





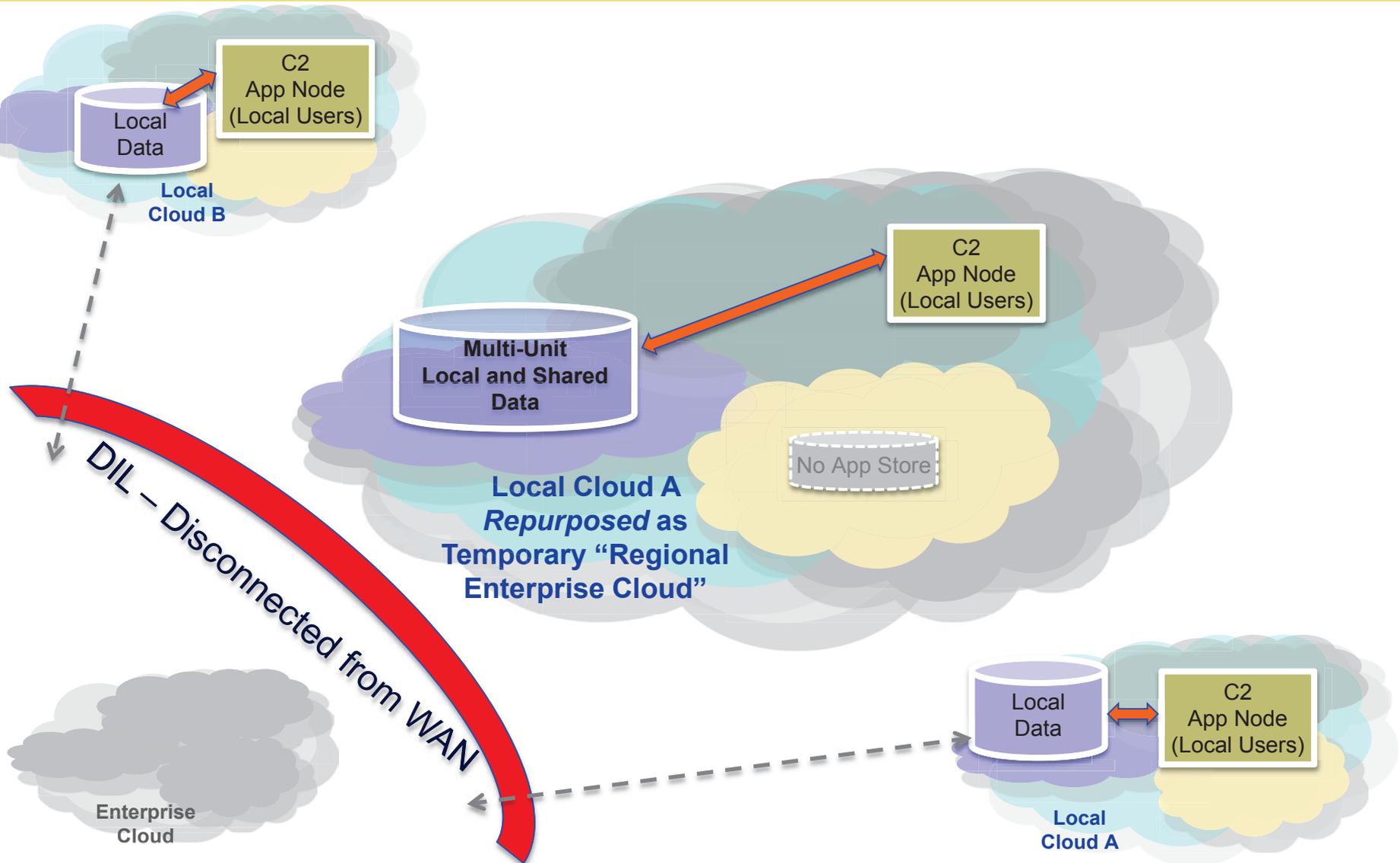
Future Navy C2 will Build on DoD IT Migration to “Google/Amazon-like” Cloud Architectures



“Navy Tactical Clouds” will provide Continuity of Operations (COOP) in lieu of Disconnected, Intermittent, and Limited (DIL) connectivity

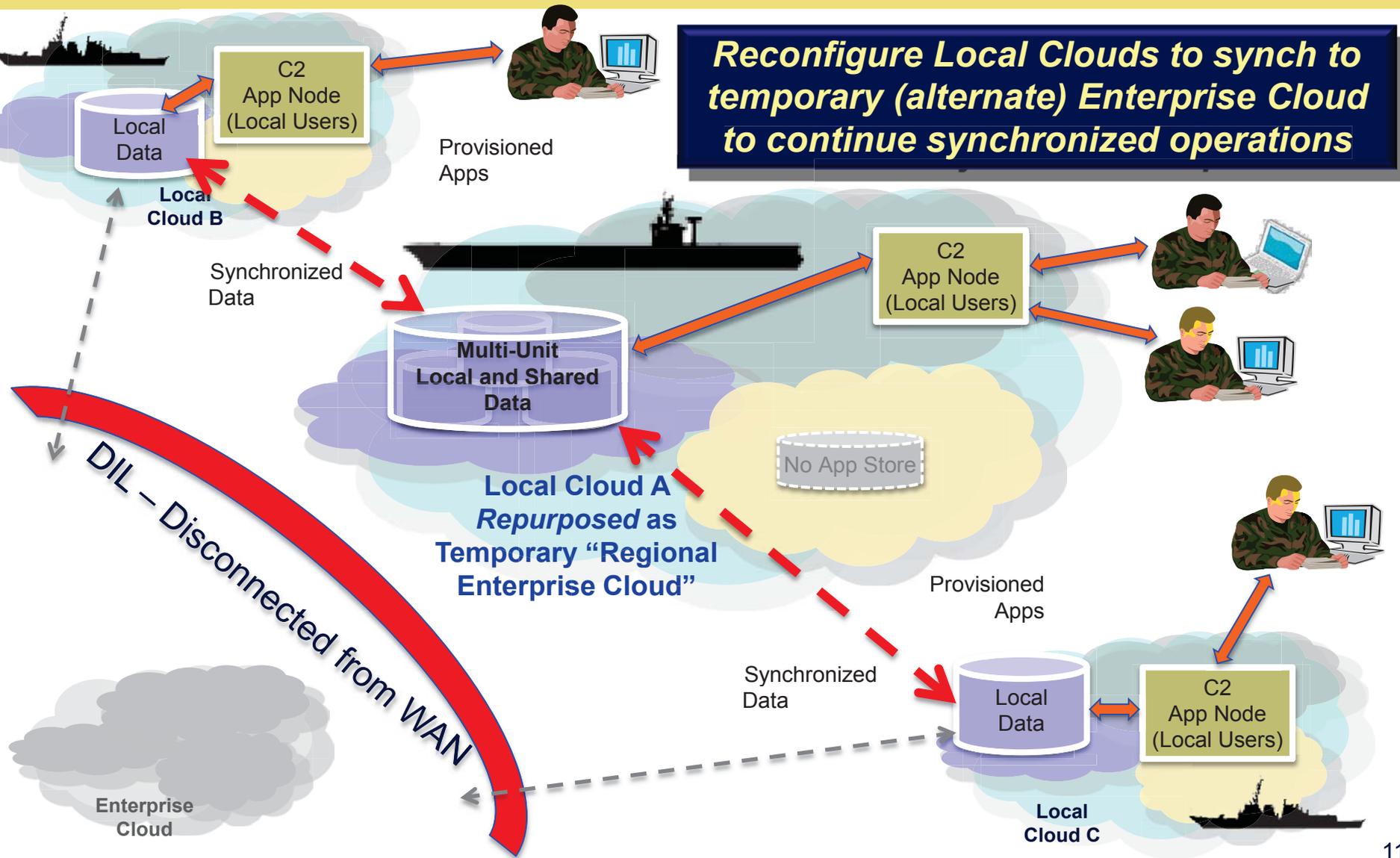


Establish Regional or Battle Group Cloud-based Network on loss of WAN





Establish Regional or Battle Group Cloud-based Network on loss of WAN





Conclusion

Navy's Future C2 systems will modernize using commercial technology advances to be...

- **More complete**

- Planning, Execution, Monitoring and Assessment tools to allow commander's to seek answers to "What is," "What next," "What if," and "What was"

- **More collaborative**

- Across echelons and mission partners (joint and multi-national) to allow Commanders to plan, re-plan, in near real time from decentralized locations that support the tactical situation

- **More cohesive**

- Integrated, seamless and interoperable data exchange across ISR, IO, Cyber, combat systems, and combat support functions



We get IT.

We also integrate it, install it and support it. For today and tomorrow.

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