



PMW 205 Industry Day# 2 Network Transformation

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25 May 2016**



Driving Needs

Strategy

Current and Future State
Architecture

Transformation Initiatives

Technical Exchange Meetings

Different user needs must be met through the seamless integration of technical solutions



Navy Private Cloud

- Server Farm and Data Center maturation
- More efficient infrastructure
- COOP/DR evolve into Resiliency
- IaaS/PaaS/SaaS offerings for non-commercial cloud data and applications

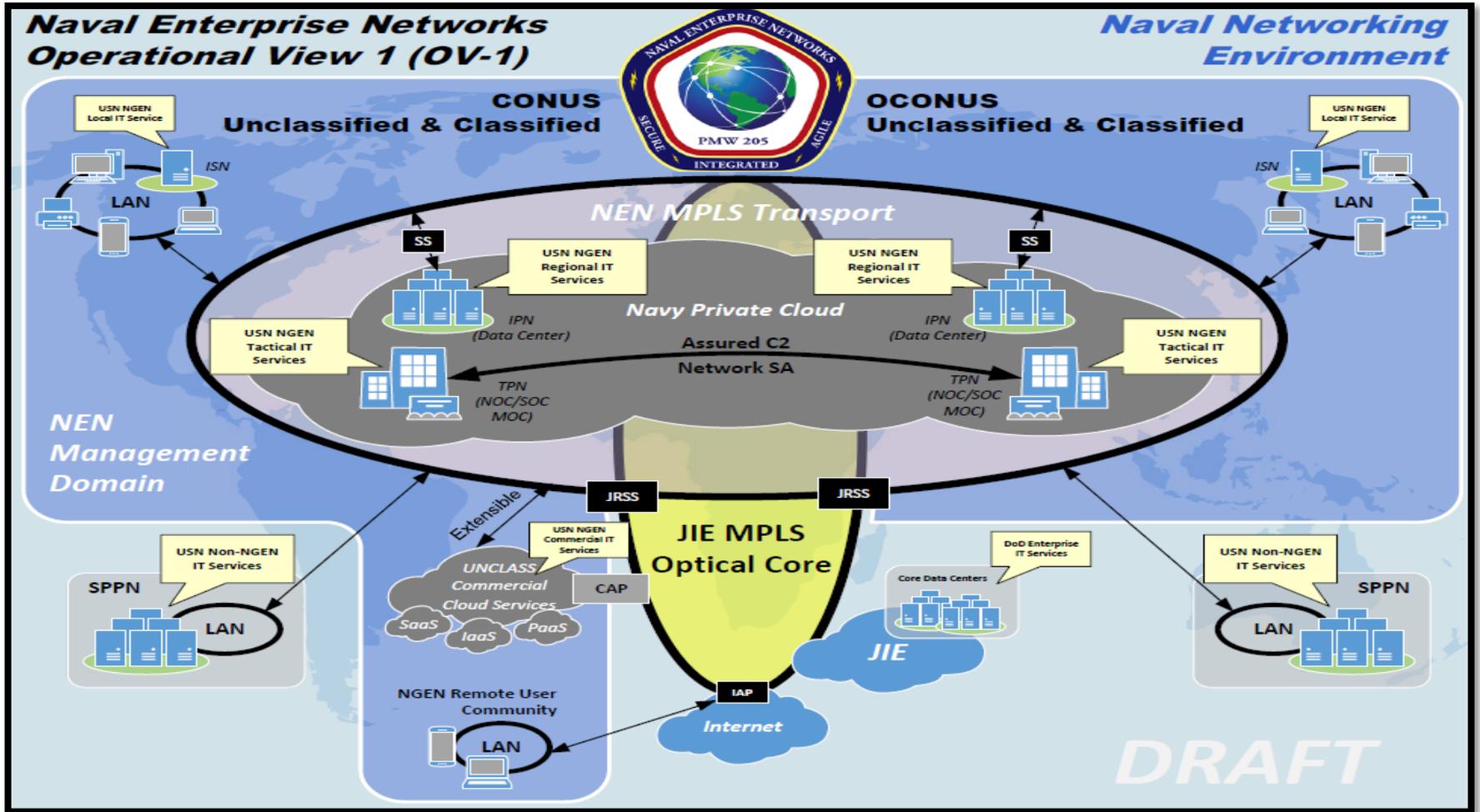
Mission Assurance

- Real time awareness through common tool sets
- Service and network reliability / availability
- Secured data, information, and networks

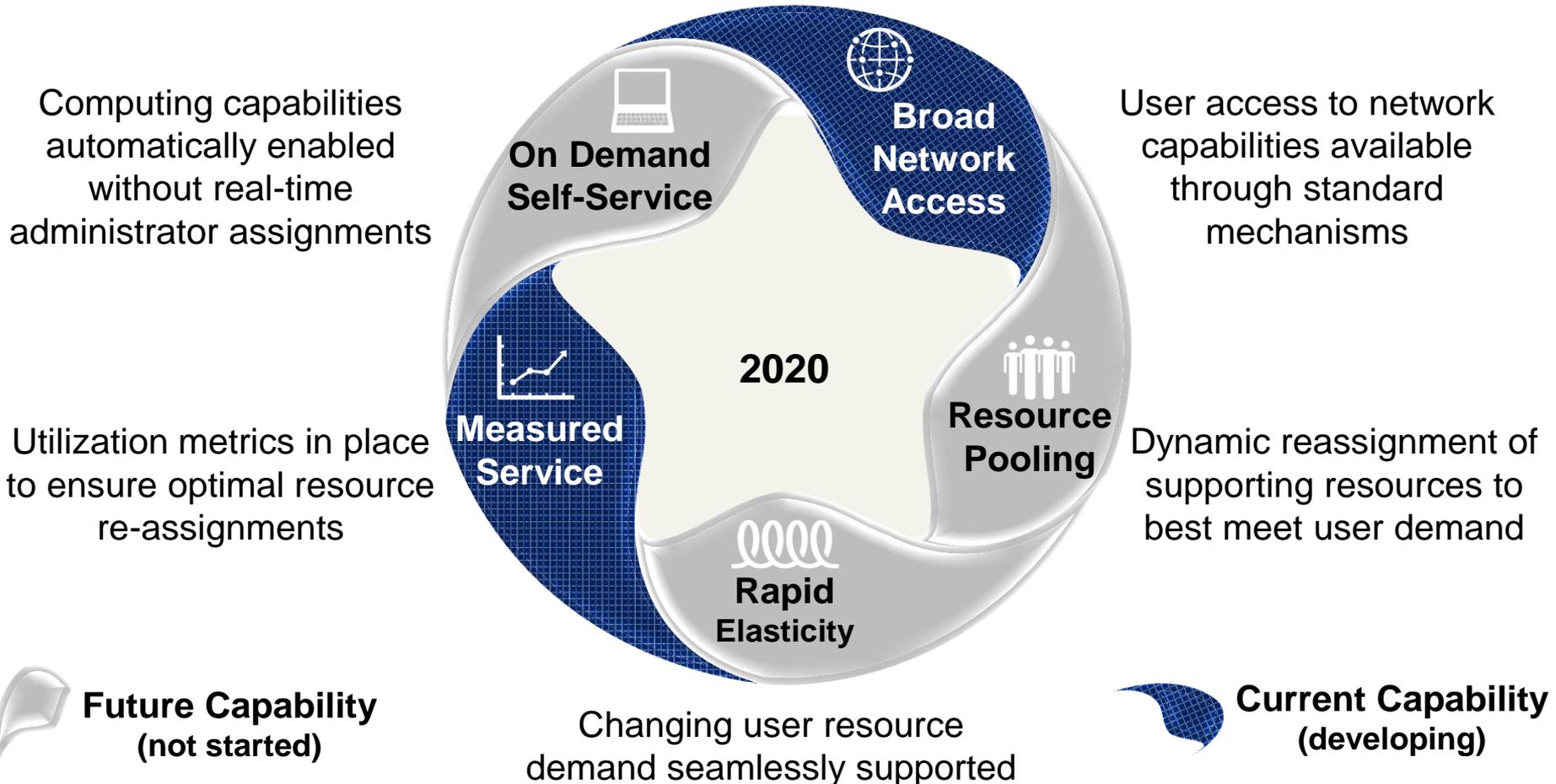
Global Service Delivery

- Mobility and UC
- Pace with Industry
- Commercial Cloud Utilization
- CONUS / OCONUS Integration
- Legacy Network Migration
- Maximum productivity

NEN will deliver flexible IT Services to meet Fleet operational needs



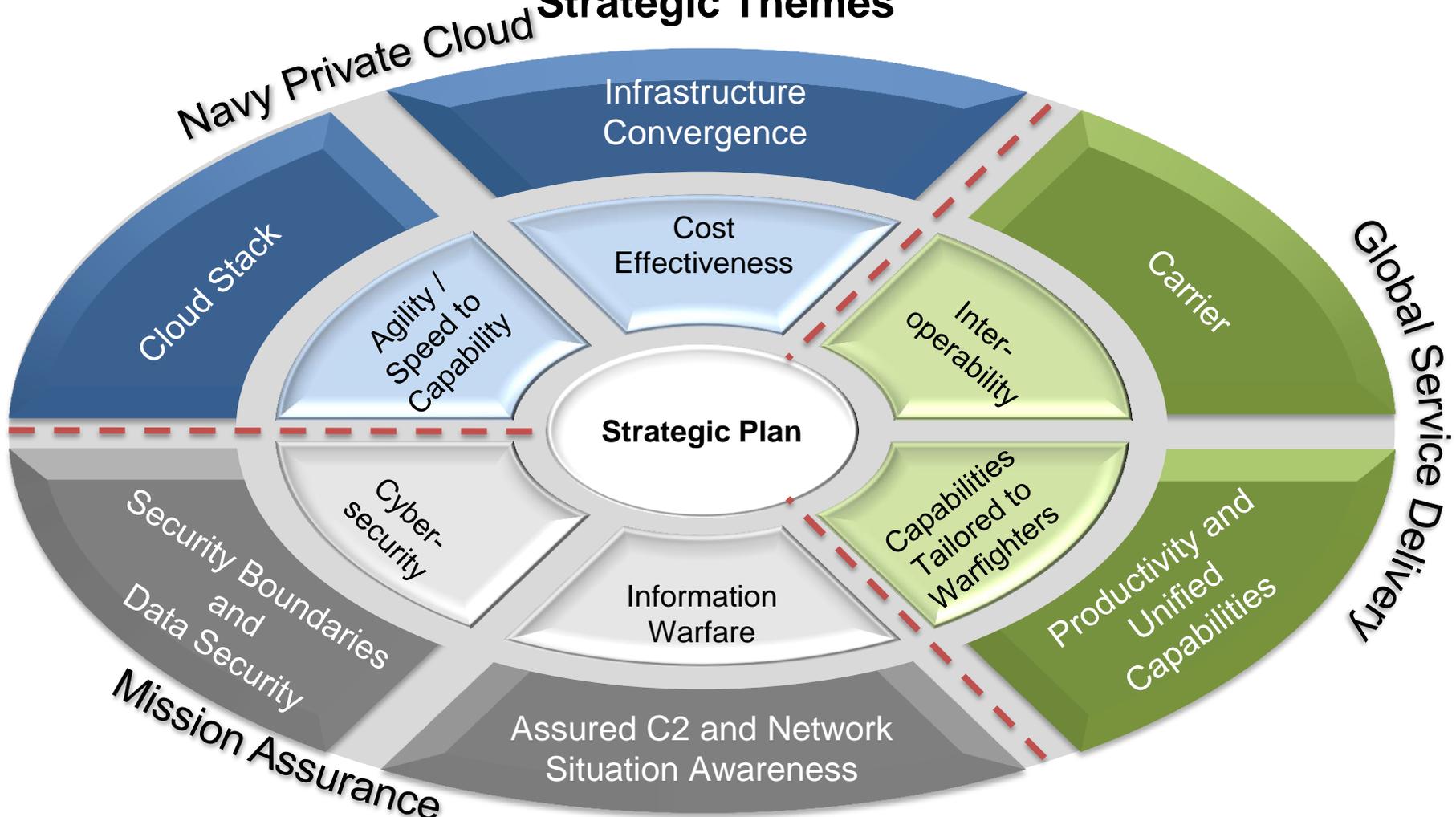
Navy network must attain key characteristics to pace industry for 2018 and beyond





Aligning the Strategy

Components of Network Transformation are aligned to PMW 205 Strategic Themes

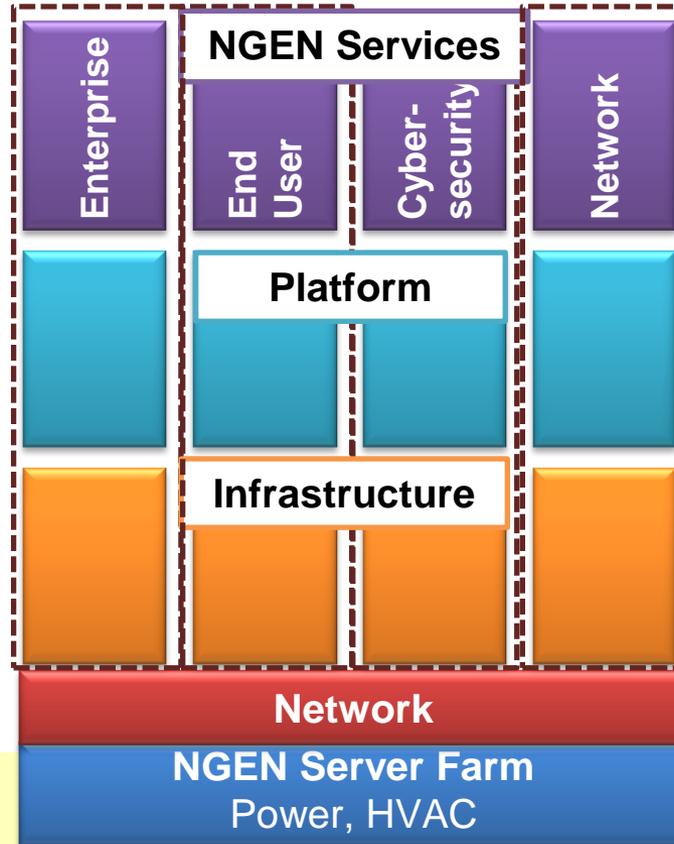
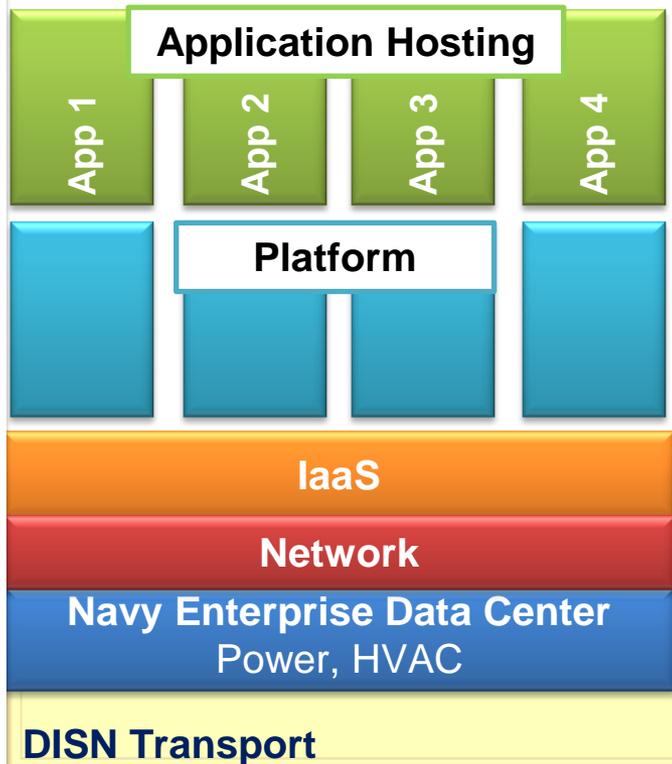




Current State Logical Architecture

Current network architecture is tailored for individual services and applications

Security design and service distribution limits service delivery by creating bandwidth bottlenecks



Security Perimeter (B1 / B2)

Silos inhibit effective resource sharing and causes myopic risk analysis

Infrastructure does not support assured services

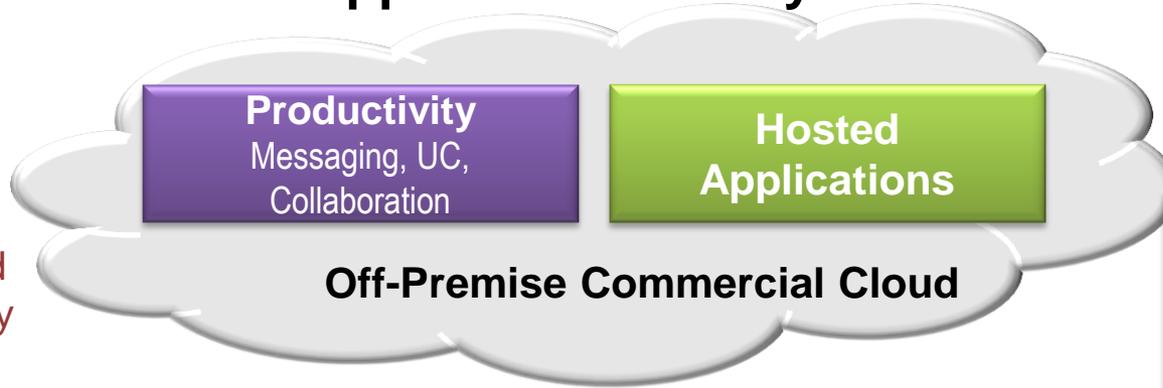




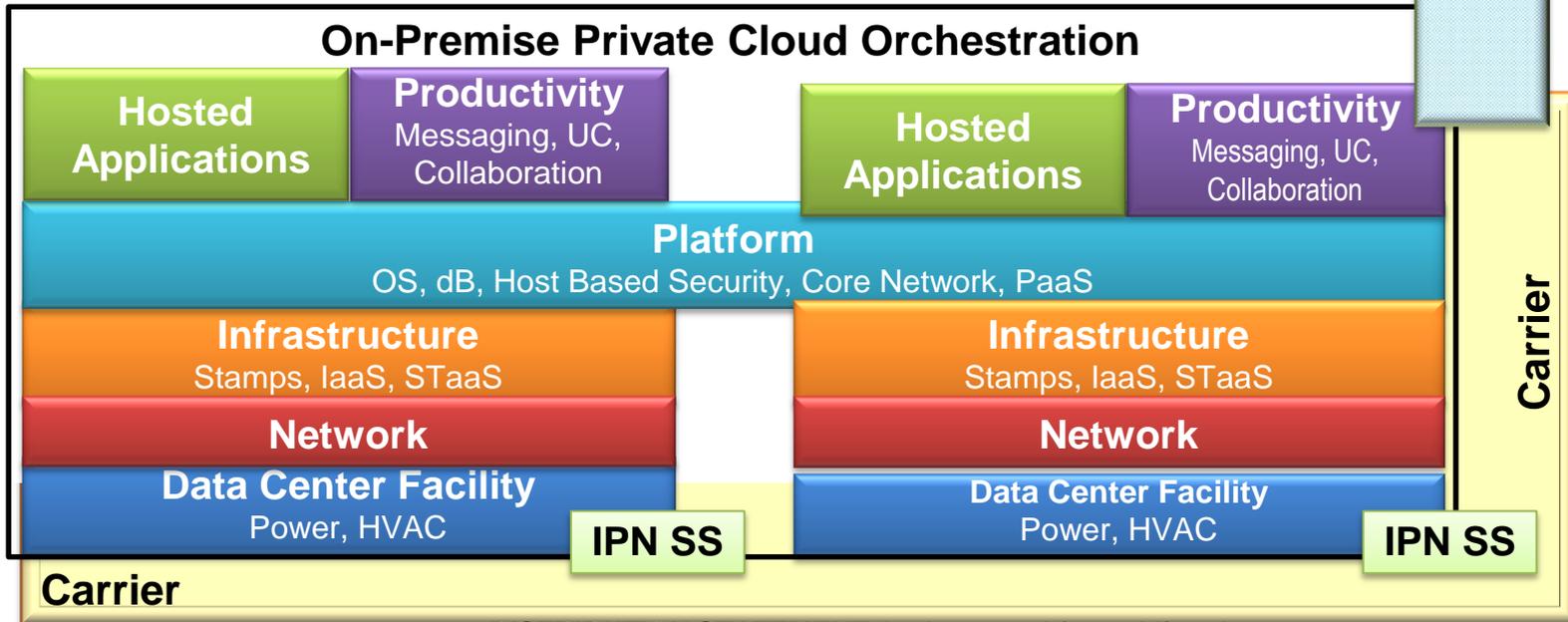
Future State Logical Architecture

Network architecture requires modifications to existing Navy applications and systems

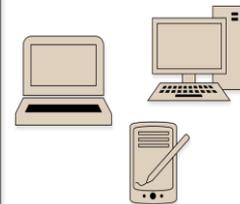
Converged architecture enables full utilization of resources and promotes Navy Private Cloud

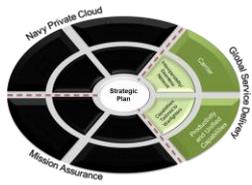


Hybrid cloud-based architecture enables Global Service Delivery to support differing user needs

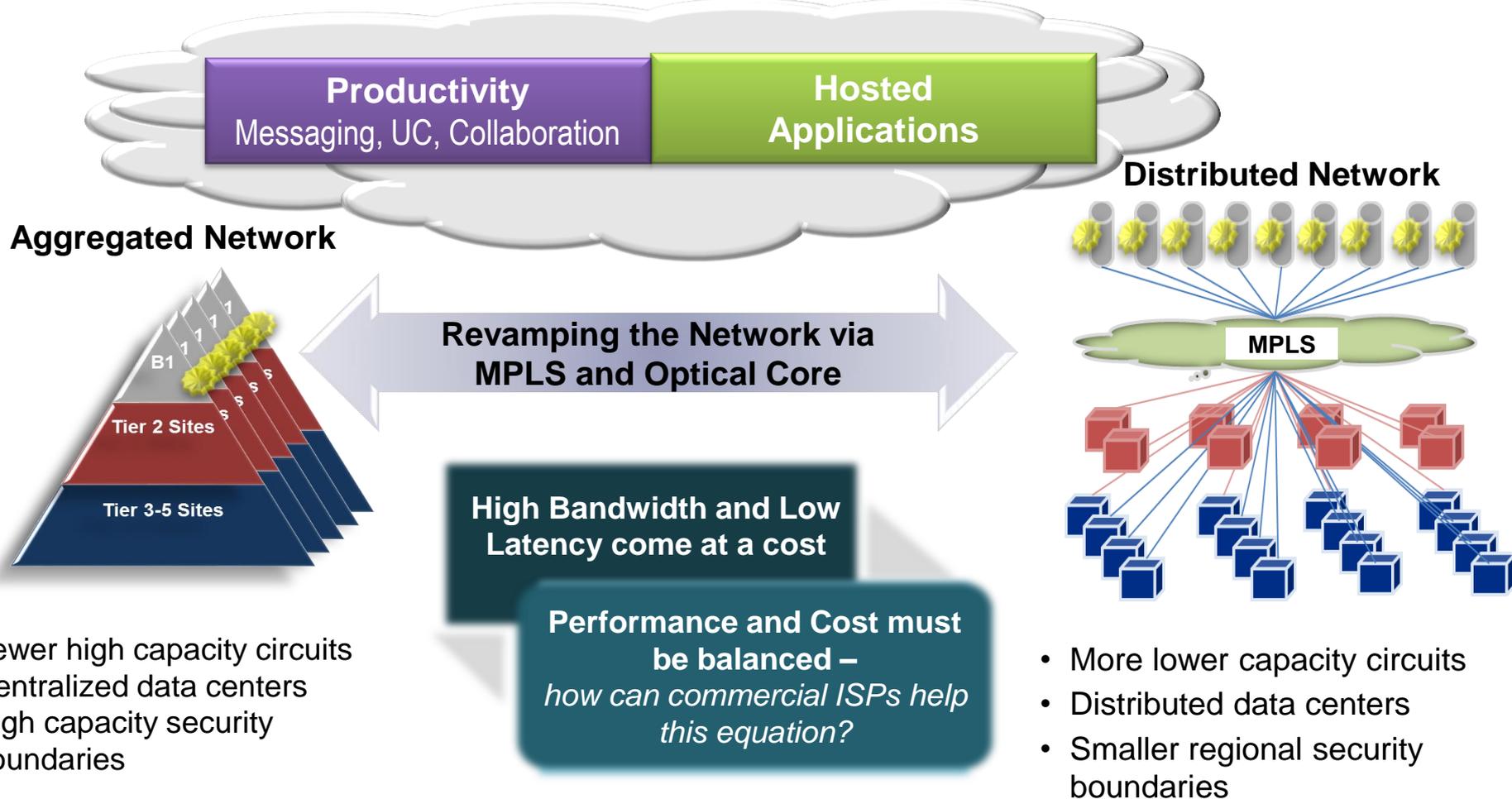


Secure design reduces vulnerabilities and enables Mission Assurance





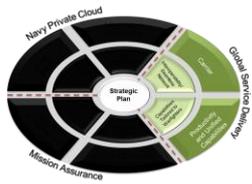
Navy requires the right balance of infrastructure to enable the mission



- Fewer high capacity circuits
- Centralized data centers
- High capacity security boundaries

- More lower capacity circuits
- Distributed data centers
- Smaller regional security boundaries





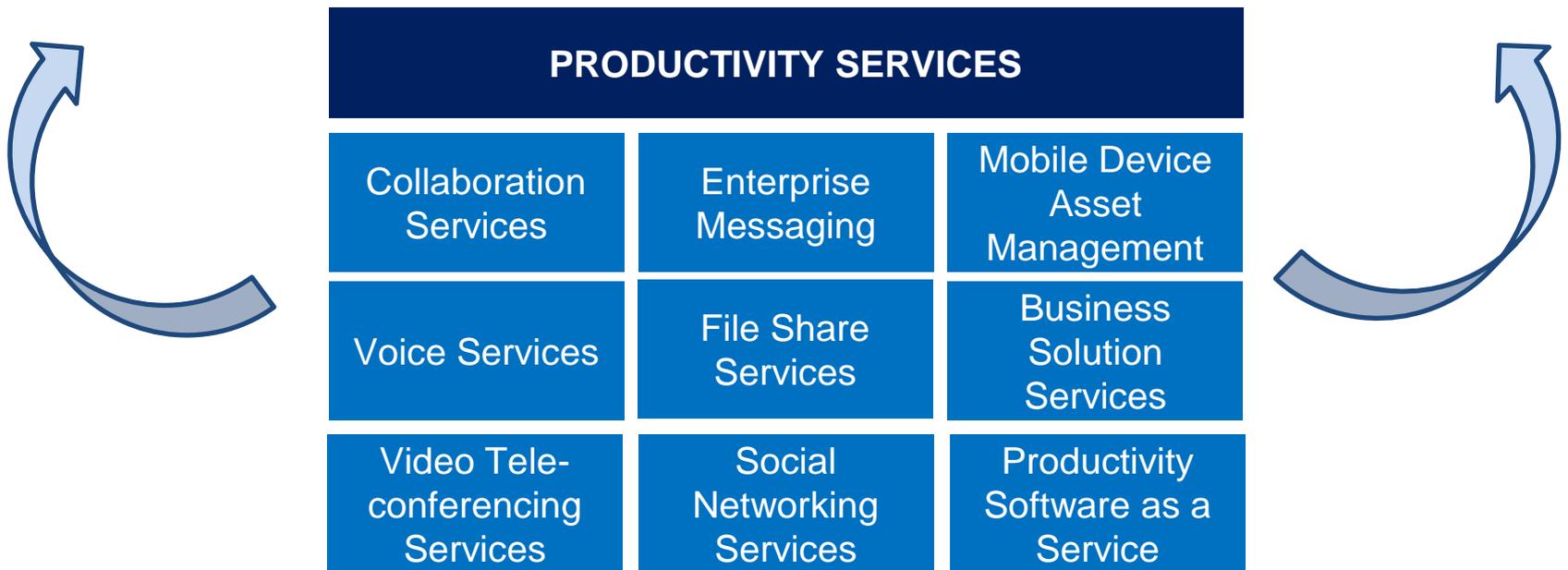
Productivity services can be delivered via different service models in a hybrid architecture

1 Off Premise

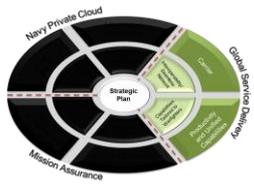
i.e., Business Services, Unclassified

2 On Premise

i.e., Tactical Services, Classified



Software as a Service offering will enable productivity services



Unified Capabilities

Aggregating communication outlets results in a synergistic solution for driving business needs

Today's business environment requires...

Collaboration

Mobility

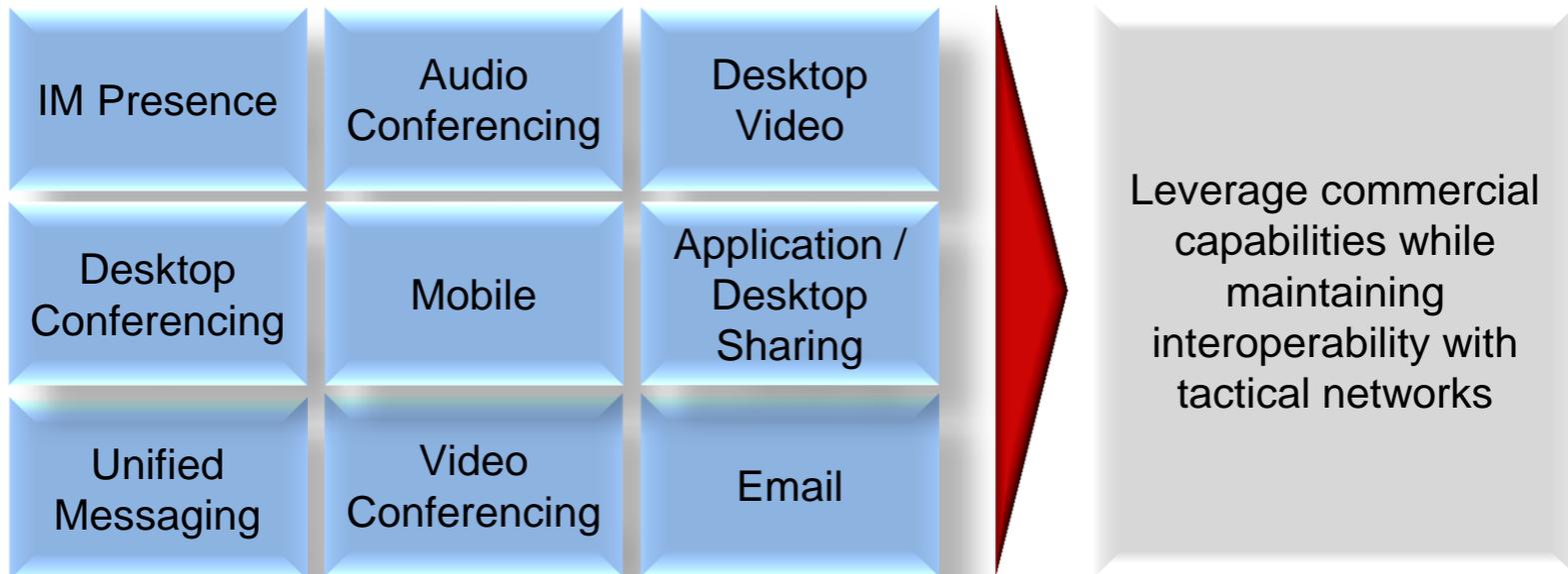
Telephony

Messaging

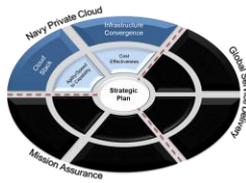
Business Processes

Social Media

...converged and integrated services to increase productivity and collaboration



**UC is a subset of Productivity*



Infrastructure Convergence

Capabilities delivered on the converged infrastructure meet Federal and DoD mandates for consolidation

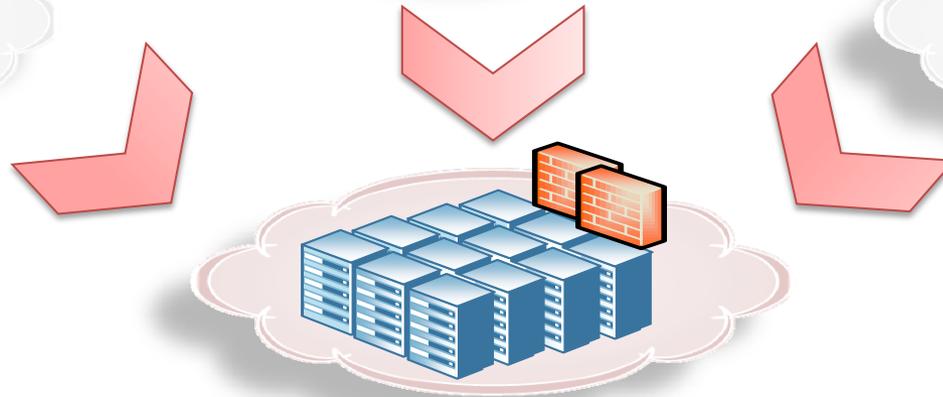
Navy Enterprise Data Centers
Applications



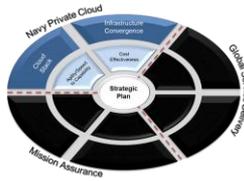
Navy Echelon II Data Centers
Applications



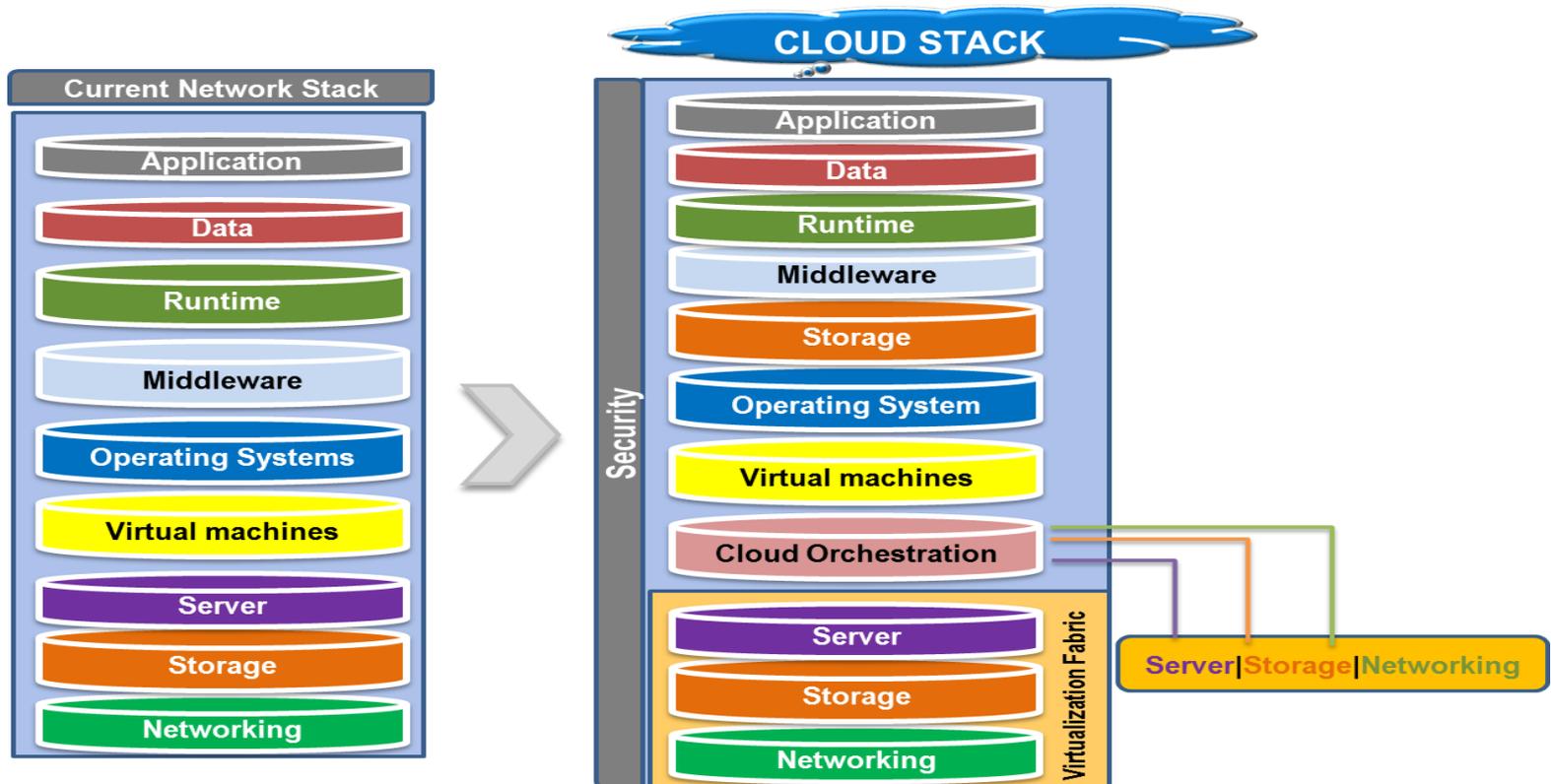
NMCI Server Farms
Services



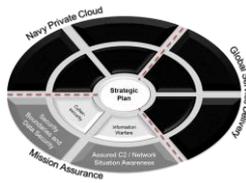
Navy Installation Processing Node (IPN)



Cloud orchestration and converged infrastructure are key to delivering efficiency



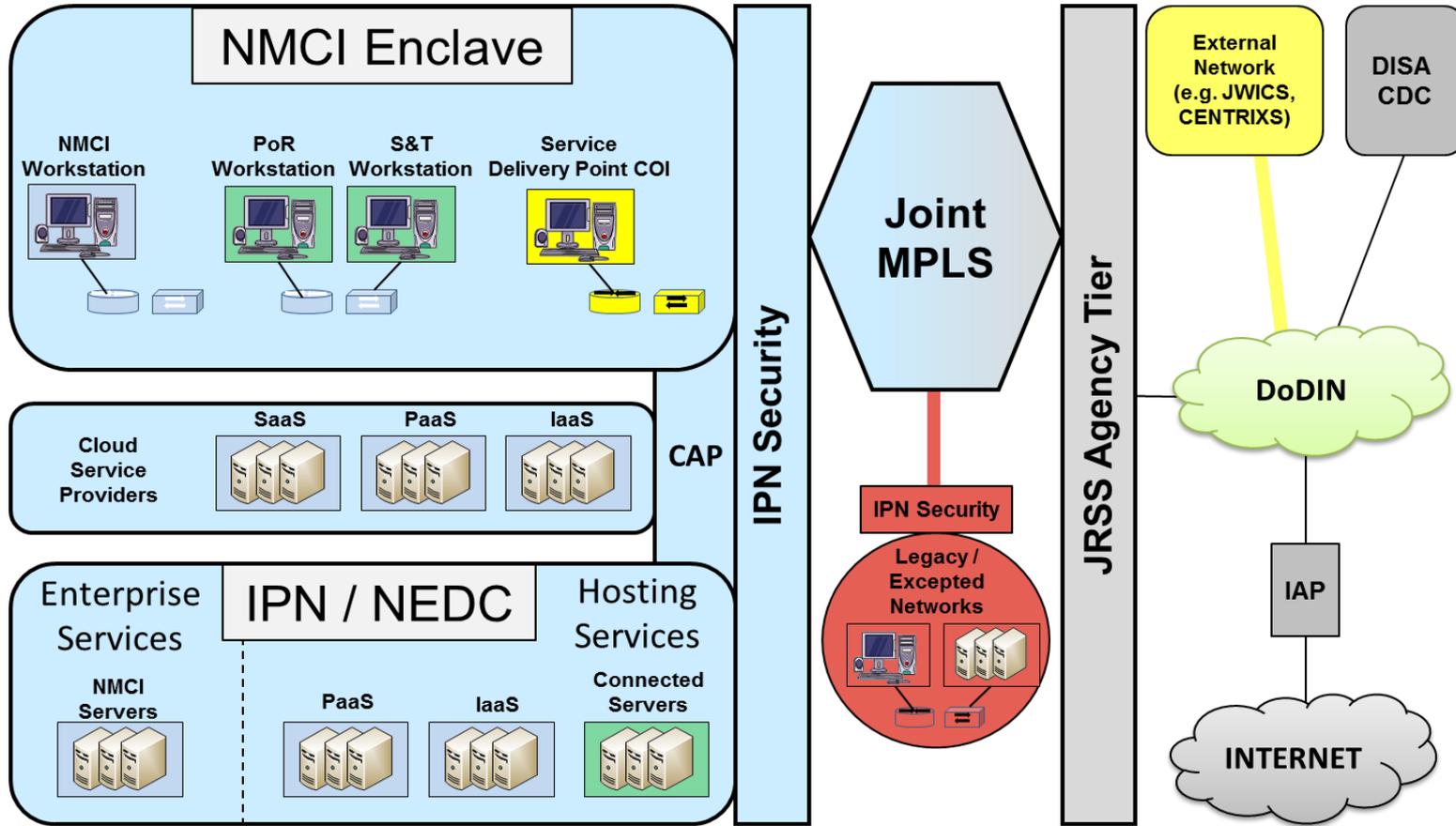
The network will be based on cloud computing models and an Open Systems Architecture



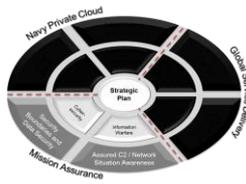
Security Boundaries

JIE Single Security Architecture will redefine security boundaries

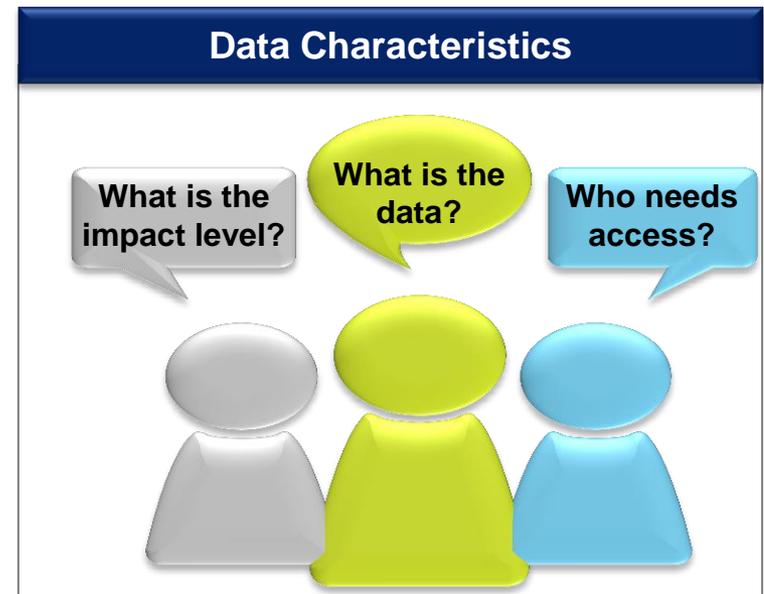
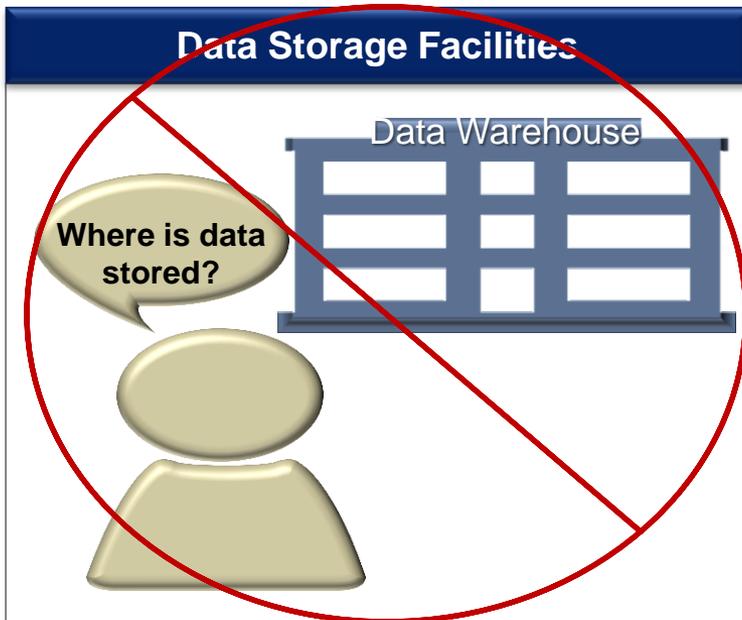
**NOTIONAL
 END STATE**



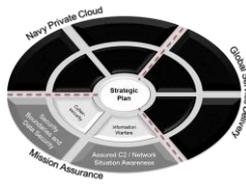
- NMCI Managed
- Non-NMCI Hosting Sites
- External Network Transport
- COI Network Transport
- NMCI DMZ/eDMZs and Hosting Sites
- Solutions for Migrating Non-NMCI Systems



A perception shift is needed to utilize cloud technologies

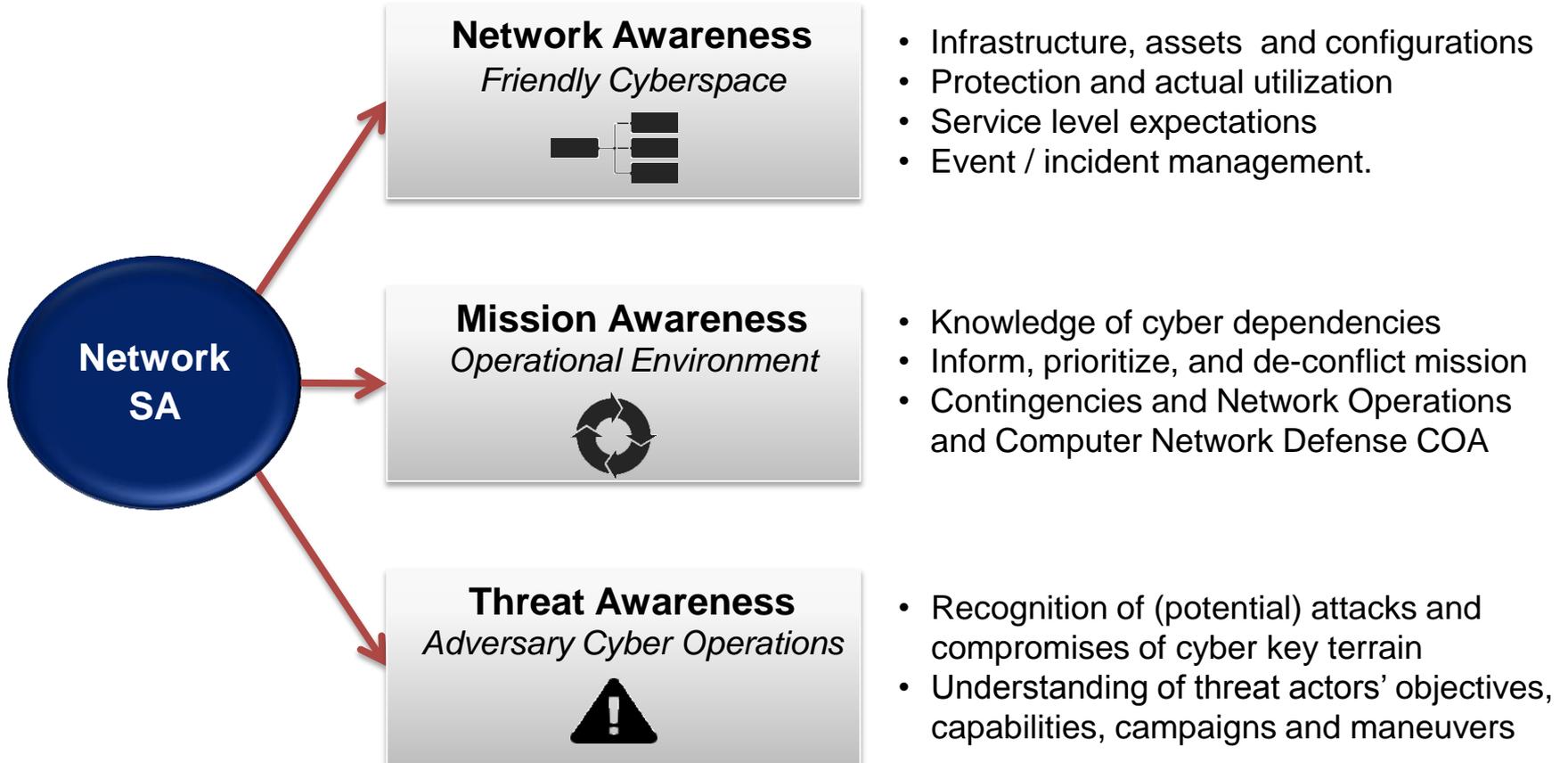


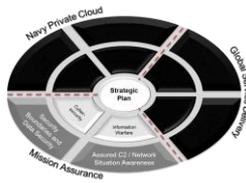
Understanding the data will allow for more effective, efficient, flexible and secure solutions



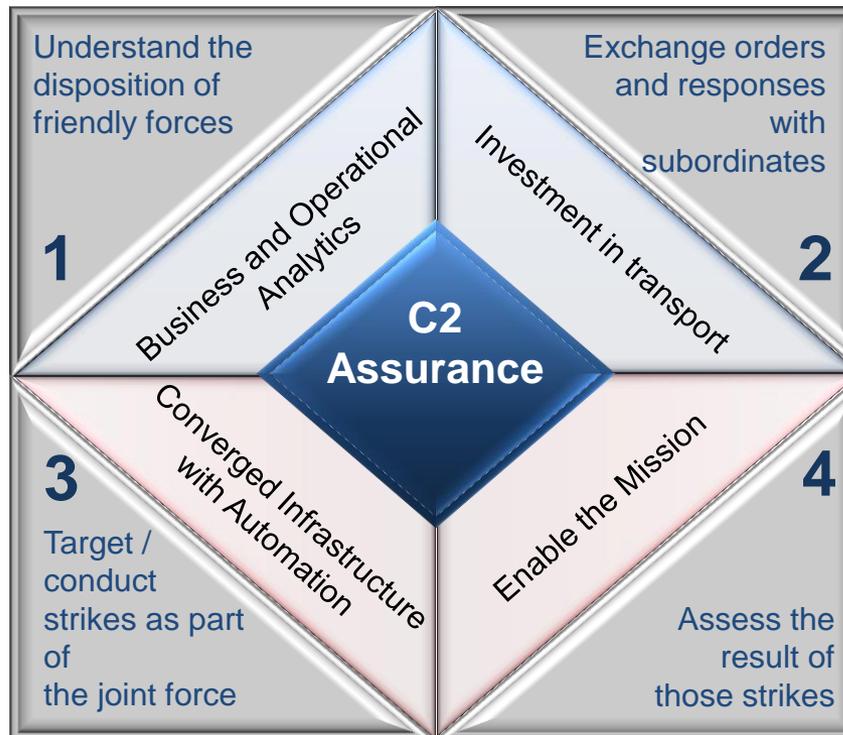
Network Situation Awareness

Awareness is a result of network analytics and business intelligence informing network maneuvers and enabling missions





Sensing the environment, understanding our adversaries, and operating & defending our communications and networked systems



Deliver services so the Fleet can complete its mission

Network Transformation Technical Exchange Meetings

PMW-205 will conduct Technical Exchange Meetings (TEM) with Industry to discuss problem statements / use cases

Purpose

Inform the overall direction of Navy Network Transformation



Navy Private Cloud
Transition and Reuse



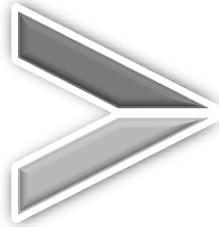
Mission Assurance
Delivery and awareness



Global Services Delivery
Network Structure



NEN publicizes TEM guidelines via SPAWAR E-Commerce Central/FEDBIZOPS



Industry has 3 week timeline to present whitepaper responses



Reviewers select whitepapers based on evaluation criteria

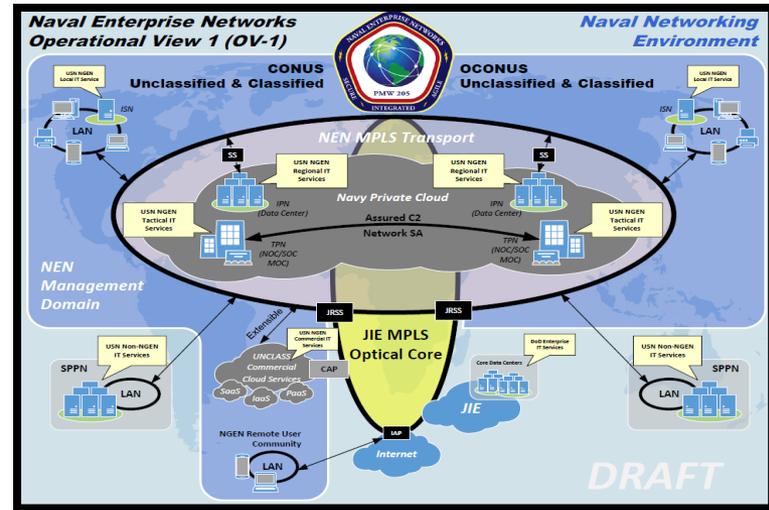
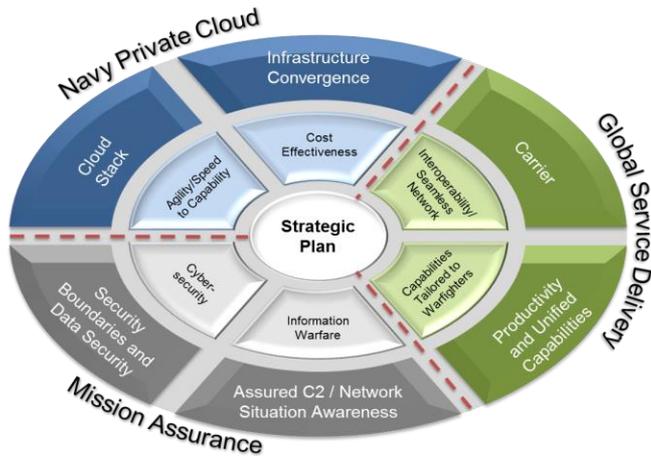


Government schedules TEM sessions

Note: No product selection or acquisition decisions will directly result from the TEMs



NEN is transforming strategically, both the business and the technical, to deliver the Fleet's operational requirements



PMW 205

Navy Private Cloud	Mission Assurance	Global Service Delivery
Transition and Reuse 	Delivery and Situational Awareness 	Network Structure 