



# Naval Tactical Networking

CDR Justin Shoger  
OPNAV N6F4 NTN

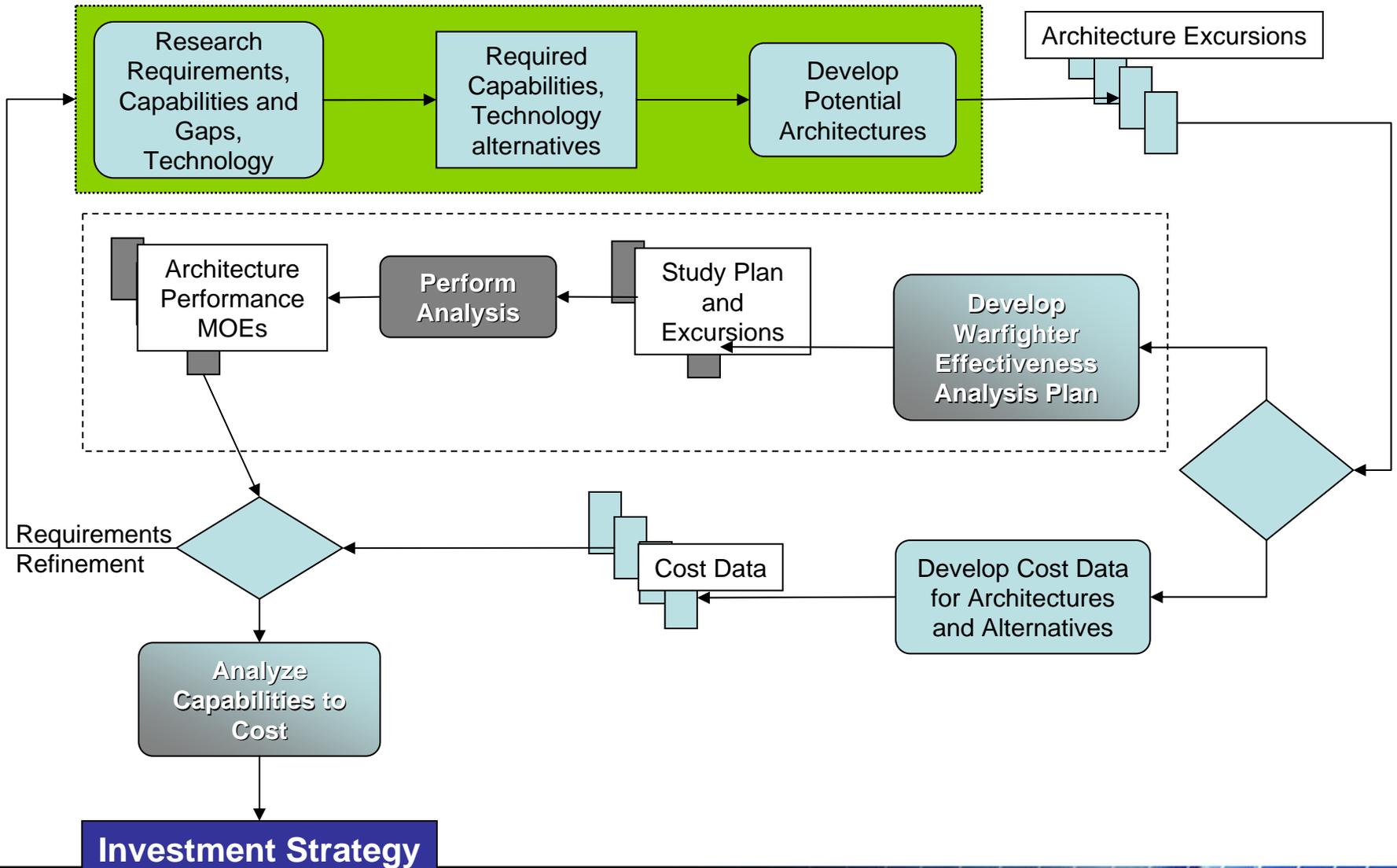


## Background

- Line-of-Sight Communications studies
- Leadership direction
- Naval Tactical Networking Goal
- Potential Architecture
- Focus areas



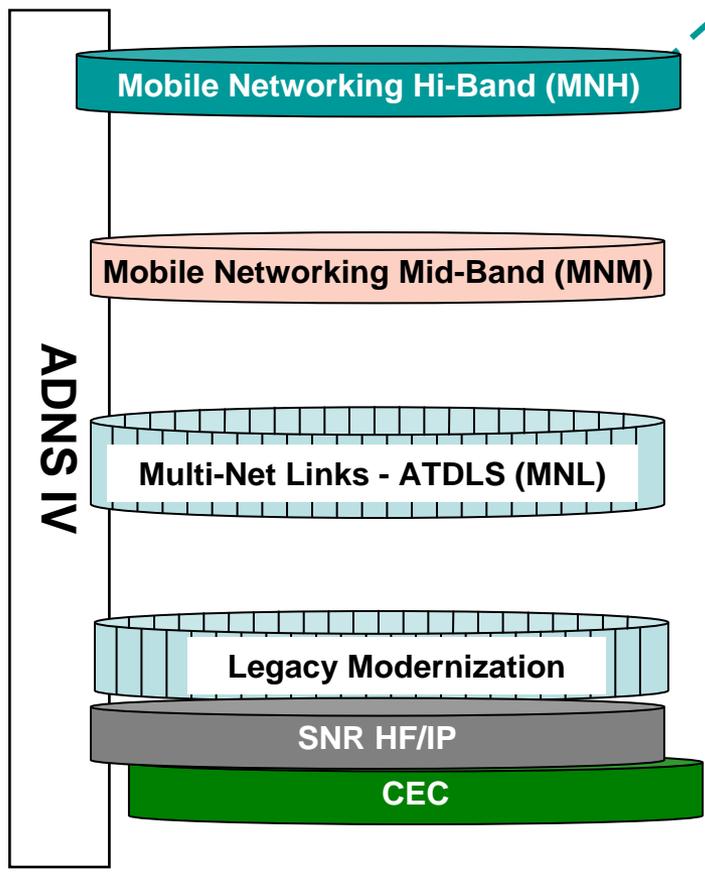
# Methodology





# Study Architectures

## Tactical COP



MNH Relay A/C



SATCOM Relay A/C



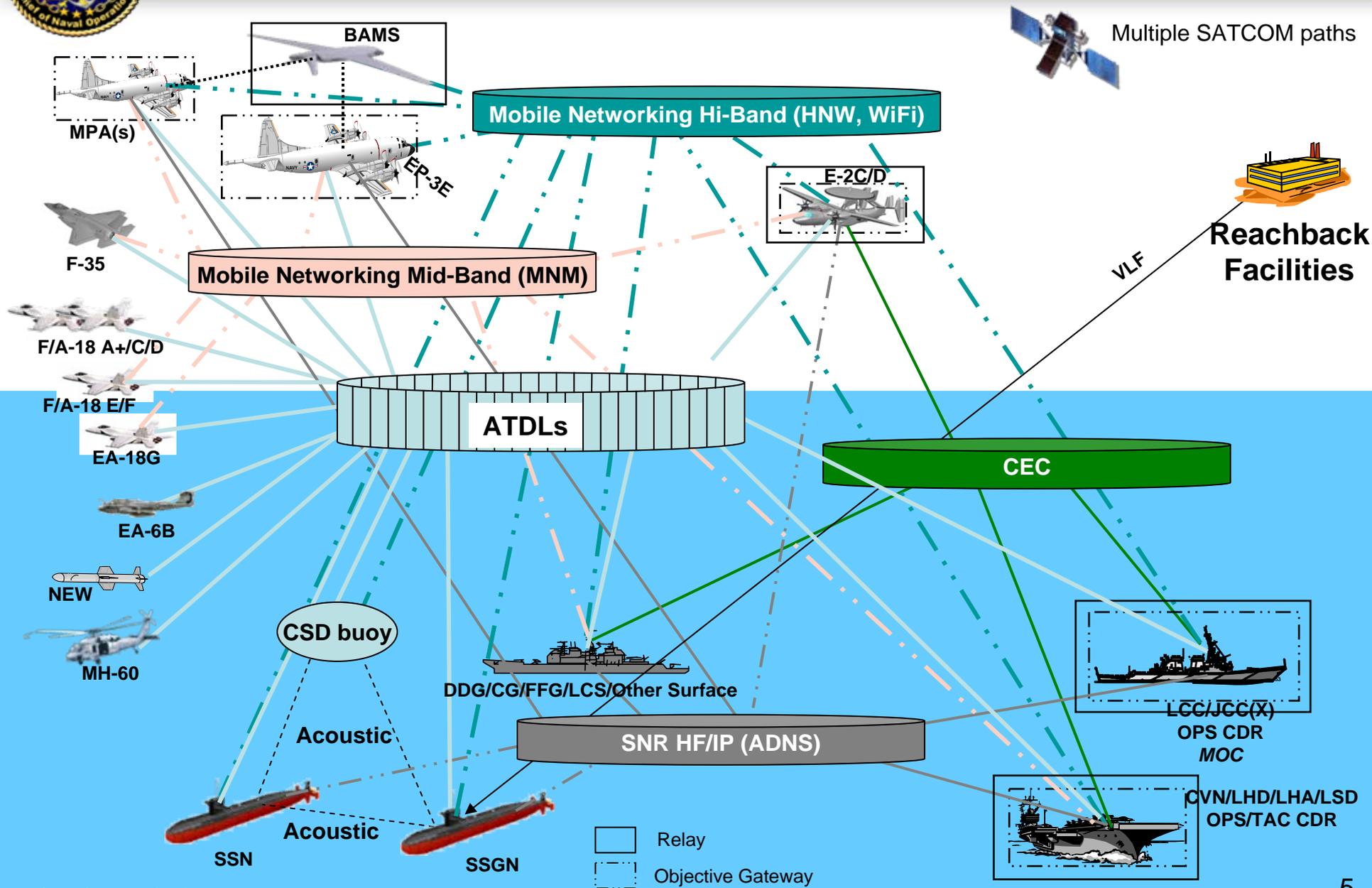
CDL Relay A/C  
MNL MNM MNH



Reachback Facility



# NTN Strawman Architecture Core Tactical Edge Network

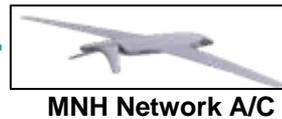
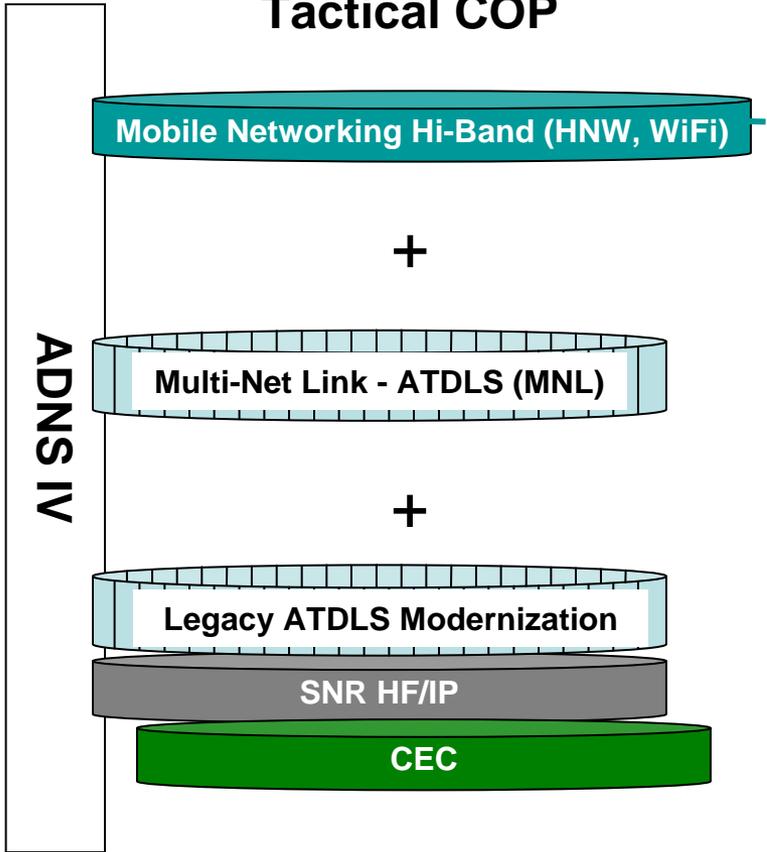


HF/VHF/UHF voice/data not shown, but assumed



# Potential Architecture

## Tactical COP



Reachback Facility

Legacy plus MNL meets lower bandwidth tactical edge information requirements

### MNL+ Legacy:

CMN – provides up to 4 times the time slots for the tactical user

TSR – improves network efficiency for the high use assets

DMN – dynamic switching between nets

SNR/HFIP – provides capabilities to interoperate with older platforms & coalition partners

- MNH meets ISR bandwidth needs with communications network

**Capability at Cost**



## Summary: Focus Areas

- Tactical Level data links –
  - Assess current capabilities against current and future mission requirements
  - Improving cross-banding capability to meet C2 needs
  - Investigate capabilities to support NTISR
- High Band width networking –
  - HNW (Ku-band), backwards compatible with current TCDLs
  - Diversified antenna configurations
  - Application of commercial standards, Wi-Fi and Wi-Max, to the tactical edge
- Mobile Ad-hoc Net working (MANET) – dynamic networking
  - Networking Emulation capability to all the services
  - network performance monitoring tools and network management services for the tactical edge
- ADNS Increment IV – networking in-depth
  - Prioritize information routing
  - Decentralized autonomous policy-based network management
  - Auto-configuration and continuous network adaptation
  - Mobile security architectures



# Questions