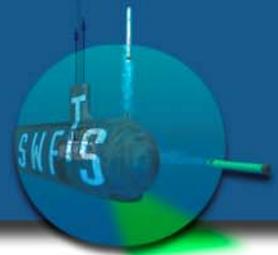


Defense Daily Open Architecture Summit

Rear Admiral William Hilarides,
Program Executive Officer, Submarines



Key Thoughts



- **Sensors, components, and platforms develop asynchronously and should be procured that way**
- **Computers and middleware are commodities**
- **Ship infrastructure is key to affordability**
- **Government risk requires smart government managers**
- **Open Architecture dramatically reduces cost to integrate new sensors or introduce new platforms**





PEO SUB's Open Architecture Implementation Principles

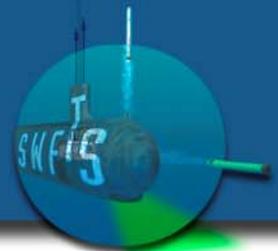


- Careful balance of competition and collaboration
- Modular designs and data transparency
- Life cycle affordability through modernization, commonality, and training
- Host interoperable Joint Warfighting Applications
- Software reuse to the maximum extent



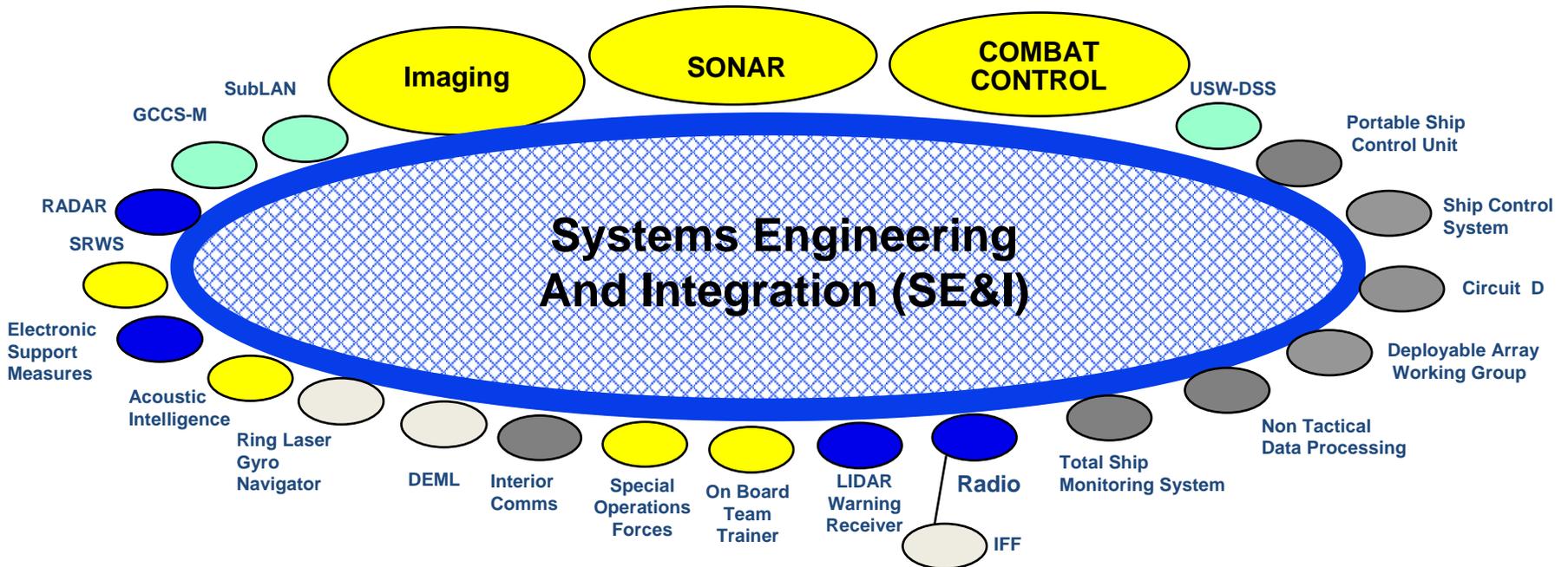


Submarine Warfare *Federated* Tactical System (SWFTS)



Business Model:

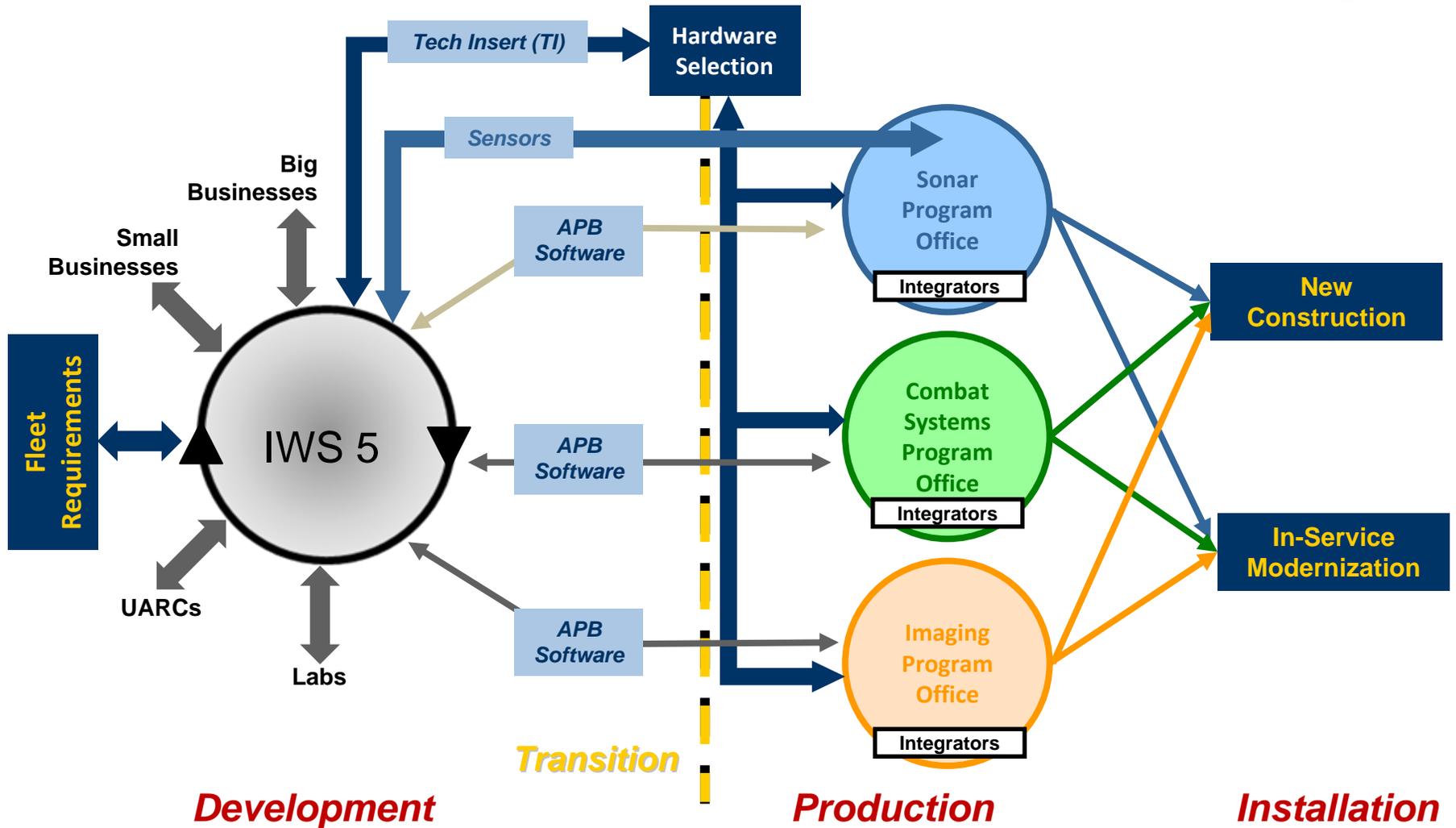
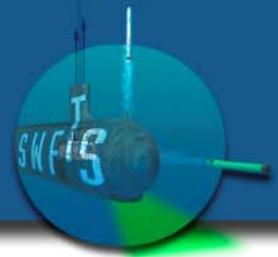
- Differing Technology Insertion Rate
- Differing Funding Streams



Published Open Standard Interfaces Enables The Federation

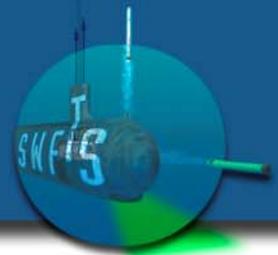


Executing Open Architecture: Submarine Model





Common SWFTS Product Line Perspective



BEFORE

SEAWOLF



LOS ANGELES



VIRGINIA



OHIO (SSBN)



Common
SWFTS
Processes &
Systems

AFTER

SEAWOLF



LOS ANGELES



OHIO (SSGN)



VIRGINIA



OHIO (SSBN)



FUTURE

BLK IV



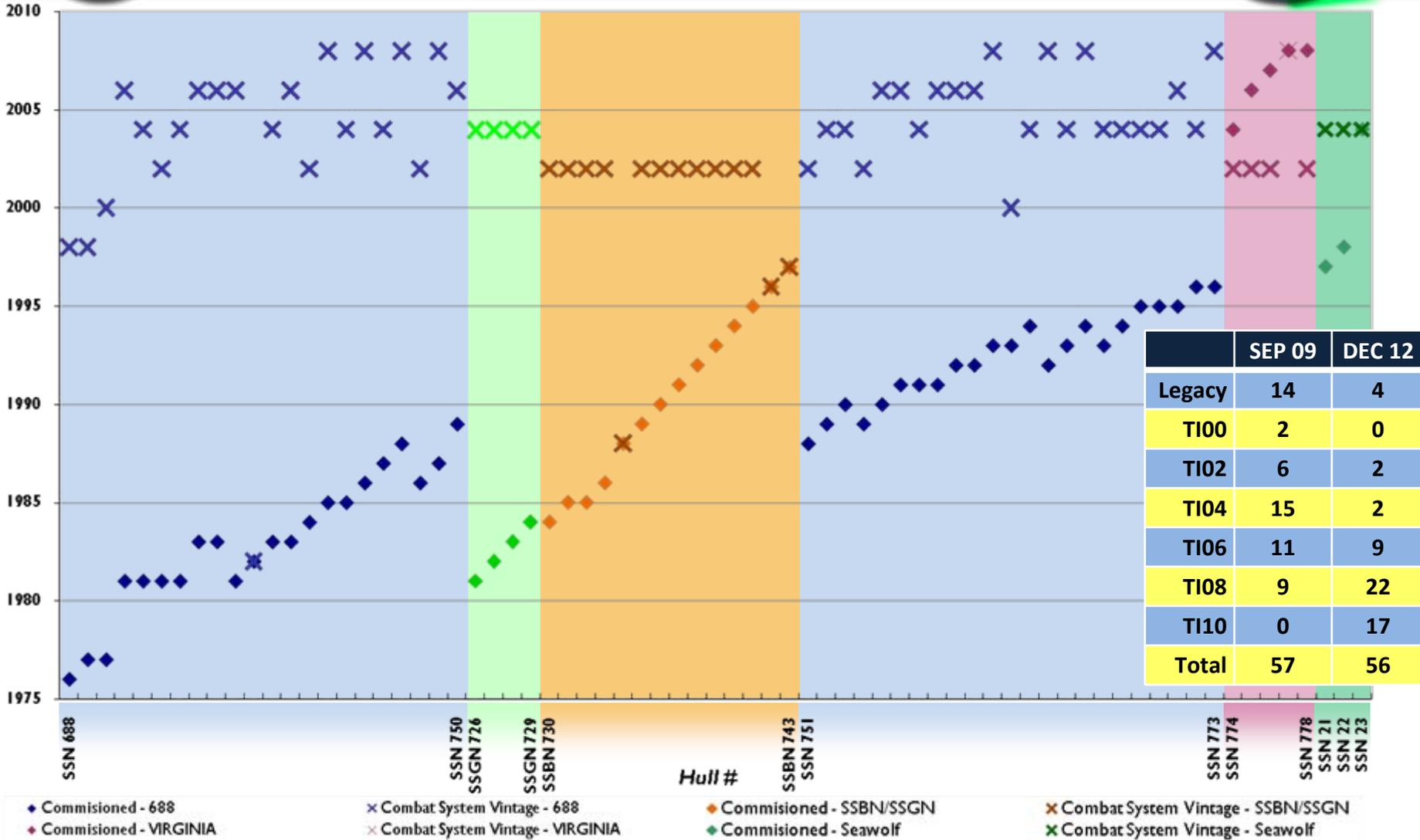
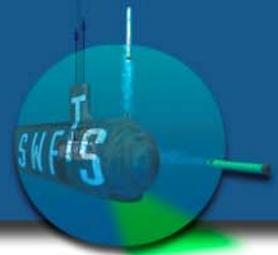
ORP



Submarine Classes Contain the Same Basic Set of Subsystems and Information Architecture; Variations are due to sensors and mission capabilities



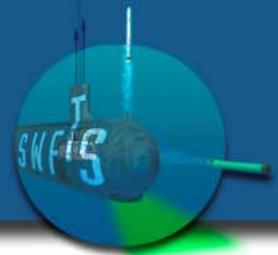
Warfare System Modernization



Retired 3 Sonar and 4 Combat System Baselines in Recent Years



SWFTS Challenges



■ Testing

- Platform availability is strictly limited
- DOT&E is platform focused
- Incremental development does not fit current testing processes

■ Resource Commitment

- Requires steady developmental funding
- Sustainment savings accrue to different resource sponsors
- Obsolescence management is critical

■ Fleet Introduction Training

