Naval EW S&T
Path to the Fleet

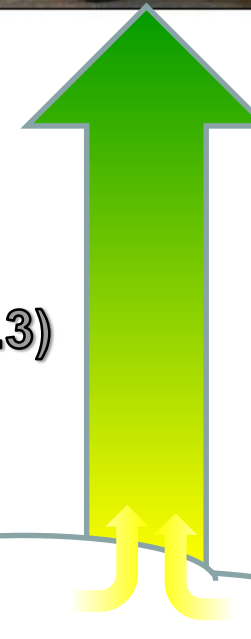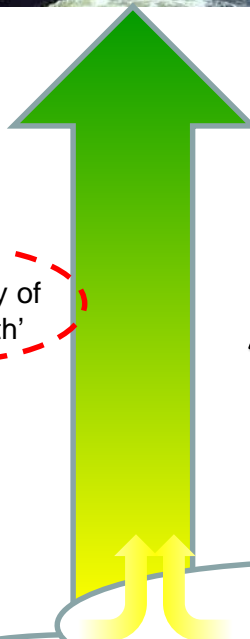Subsurface   Surface   Air   Ground

Acquisition

Acquisition (6.4+)

'Valley of Death'

Applied Research & Integration (6.2/6.3)

S&T

Discovery & Invention
(D&I 6.1/6.2)

Techniques, Components and Subsystems
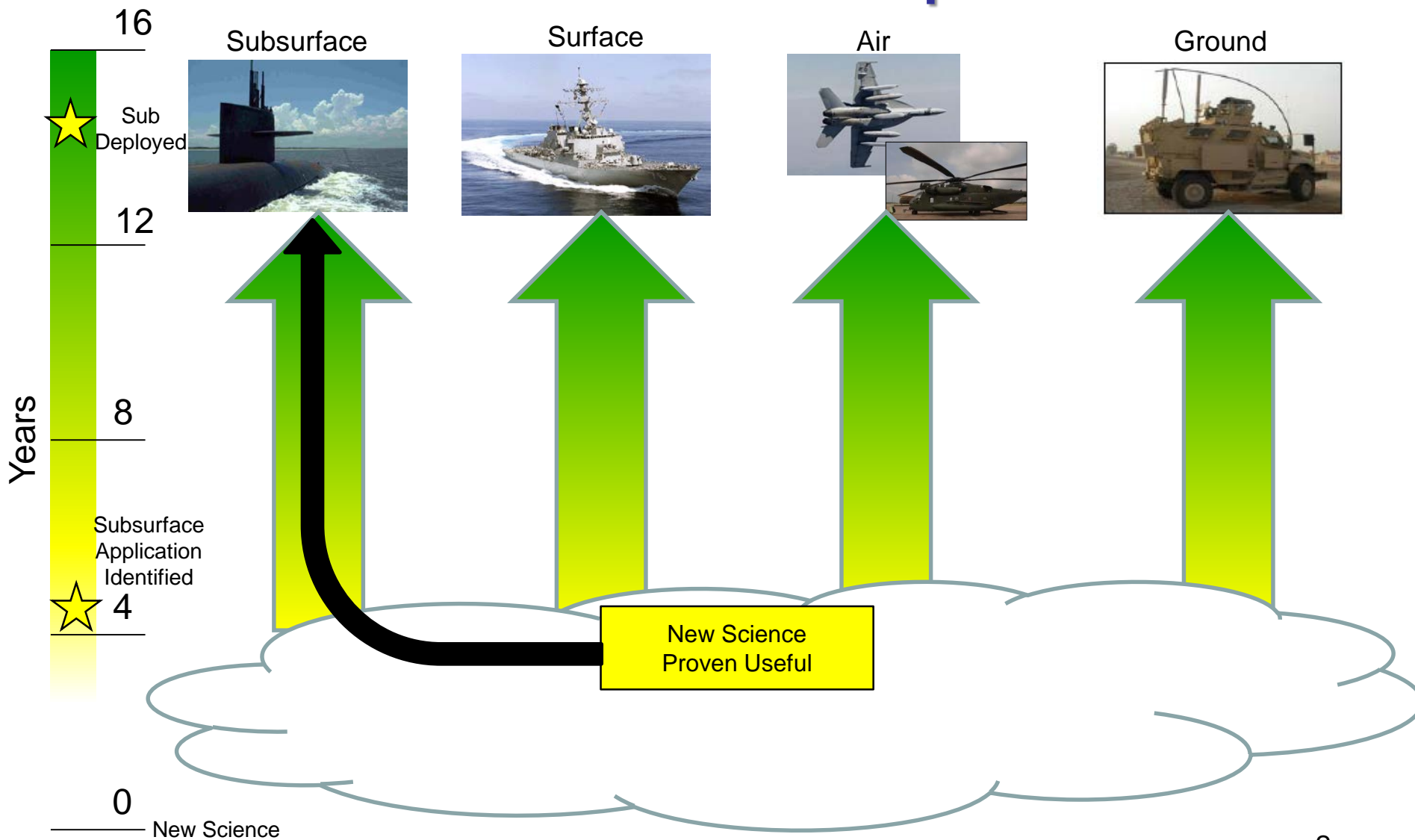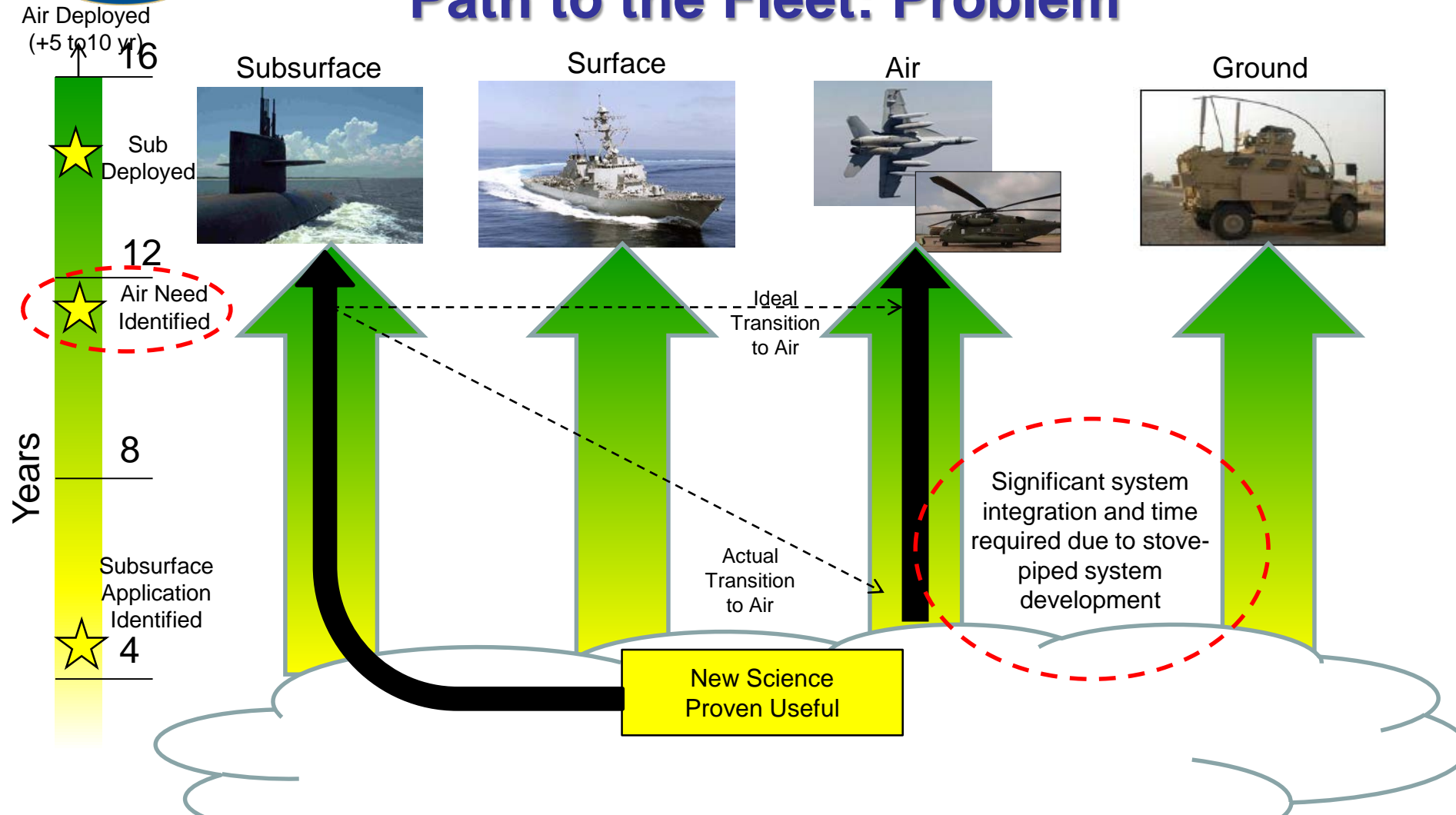improving the science of EW

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Naval EW S&T
Path to the Fleet: Example Timeline

Subsurface

Surface

Air

Ground

Years

16

Sub Deployed

12

8

Subsurface Application Identified

4

New Science Proven Useful

0

New Science

2

Naval EW S&T
Path to the Fleet: Problem

Air Deployed (+5 to 10 yr)

Years

16

Sub Deployed

12

Air Need Identified

8

Subsurface Application Identified

4

Subsurface

Surface

Air

Ground

Ideal Transition to Air

Actual Transition to Air

New Science Proven Useful

Significant system integration and time required due to stove-piped system development
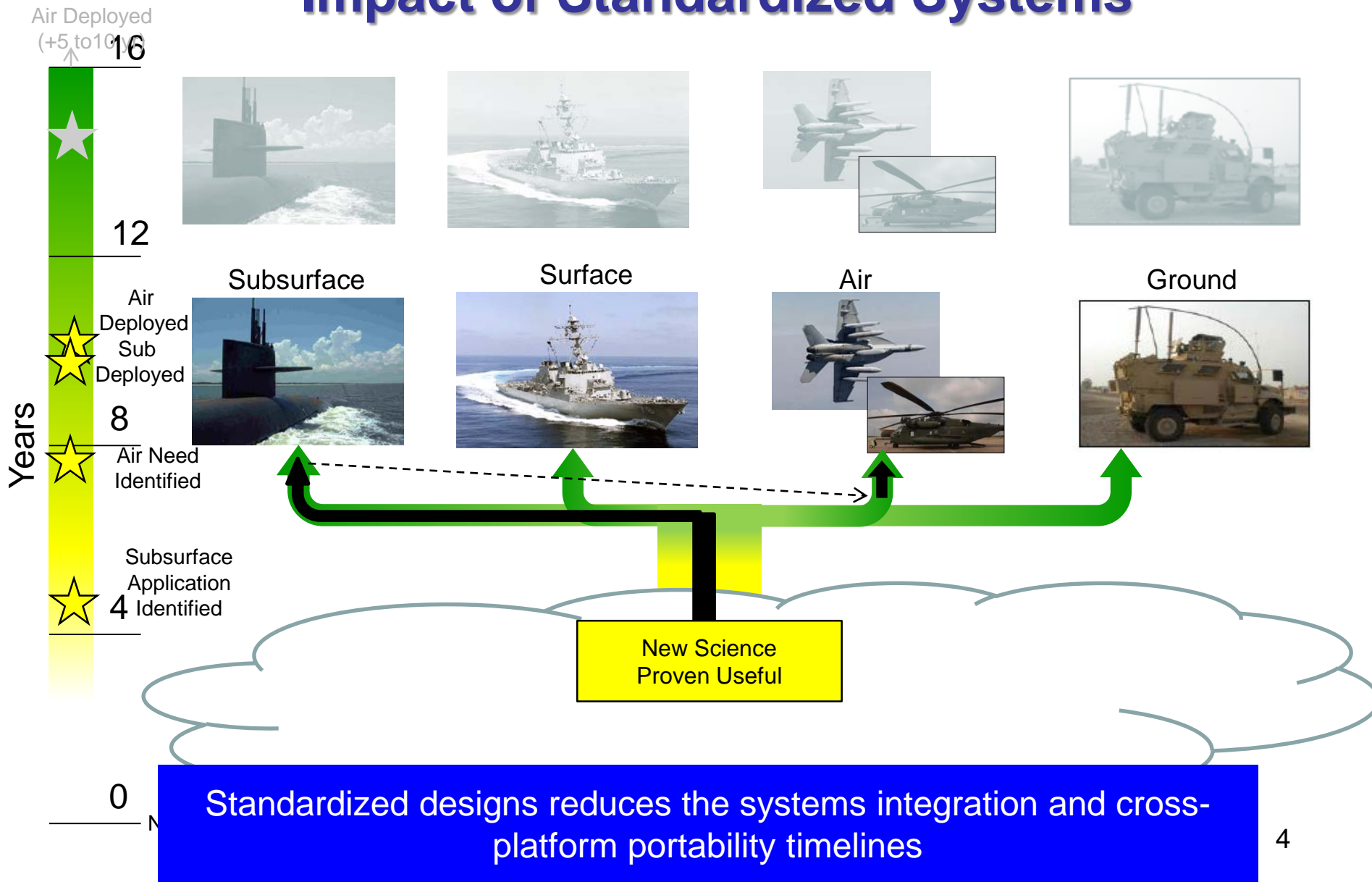
Standardized Architectures, Interfaces and Frameworks can significantly reduce development and upgrade timelines

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Naval EW S&T
Impact of Standardized Systems

Subsurface   Surface   Air   Ground

Years

16

12

8

4

0

Air Deployed
(+5 to10 yrs)

Air Deployed
Sub Deployed

Air Need Identified

Subsurface Application Identified

New Science Proven Useful

Standardized designs reduces the systems integration and cross-platform portability timelines

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Naval EW S&T
Impact of Standardized Systems

- This is nothing new; open interface standards exist for the purpose described
  - Existing standards don't entirely meet the Naval needs for interfaces in hardware and software

- Use of open standards are a principal of DoD Open System Architectures
  - Yes, but modifications to standards to support DoD applications result in non-open interfaces which are only *based on open standards*
  - This continues the stove-piped technology investment obstacle

- Naval EW systems require hardware and software interfaces which more completely support naval EW system requirements
  - Not just a 'Naval EW' Issue: Collaborative efforts across the DoD and IC to improve and incorporate system interface standards are ongoing

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Naval EW S&T
Way Forward

- Navy EW S&T is working closely with the Army, as well as other DoD and IC organizations, FFRDCs and UARCs to identify requirements of desired common interfaces and system attributes

- VITA Working Groups have been established to create mechanisms to transition DoD requirements into open standards consortium for review and consideration

- Navy EW S&T programs have been incorporating VITA standards and recommended enhancements into system designs currently being derived

- Continuing collaborations between DoD, IC, FFRDC, UARC, industry developers and standards consortiums to ensure optimal interface definitions

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