



Topics



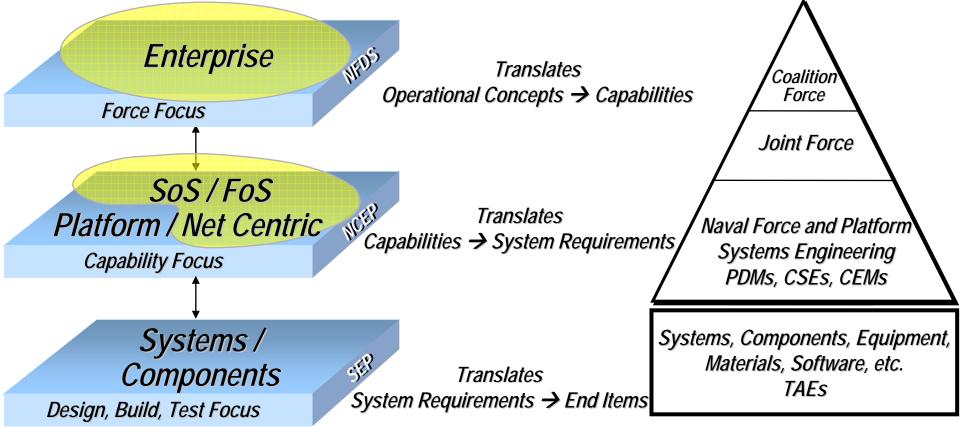
- Systems Engineering
- New Net-Centric Integration and Interoperability Management Plan
- New Software Process Improvement Initiatives
- New Modeling and Simulation
- New Research and Technology Protection

OSD Chief Engineer Panel (18 Oct 06)



System Engineering





NFDS- Naval Force Development Systems NCEP- Naval Capability Evolution Process SoS- System of Systems FoS- Family of Systems

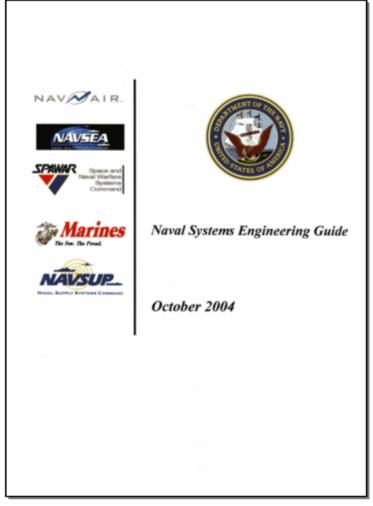
Requires Alignment of Multiple Processes, Process Owners and Products



Systems Engineering



Naval Systems Engineering Guide

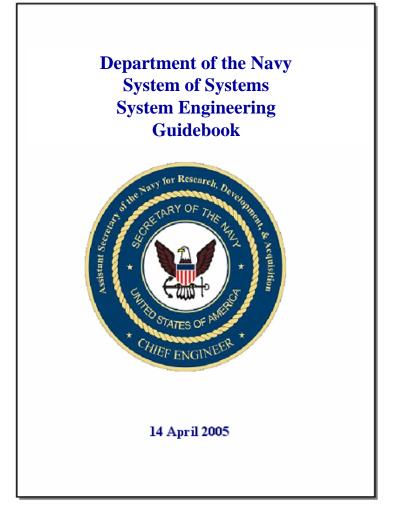




Systems Engineering



DoN SoS SE Guidebook Vol 1 & 2



https://ncee.navy.mil/



Systems Engineering



- System Engineering Human Resource Management
 - Now the focus
 - Roles Based / Right Fit
 - Future acquisition processes will impact acquisition workforce business / technical competencies and end strength requirements
 - Will manage gaps through professional development, attrition, targeted recruiting
 - Ensure workforce and leadership are grounded in principles of System Engineering with continuing education to adapt to new challenges



Net-Centric Integration and Interoperability Management Plan



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- Goal is to improve Net-Centric I & I by placing focus on four main areas which impact Navy Programs
 - Net Ready Key Performance Parameters (NR-KPP)
 - Address the technical aspects of NR-KPP's to support operational and requirements communities
 - Capability Assessments
 - Conduct large scale, net-centric SoS evaluations to assess overall mission performance
 - Information Support Plans (ISP)
 - Standardize development, review, approval, and submission as the means to coordinate I&I activity
 - Compliance with standards, consistency with interface systems
 - Architecture
 - Make them more viable and useable products
 - Support ISP development, NR-KPP satisfaction, and mission capability analysis to enable good decision making
- Utilize a centralized planning / decentralized approach to execute

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Software Process Improvement Initiatives

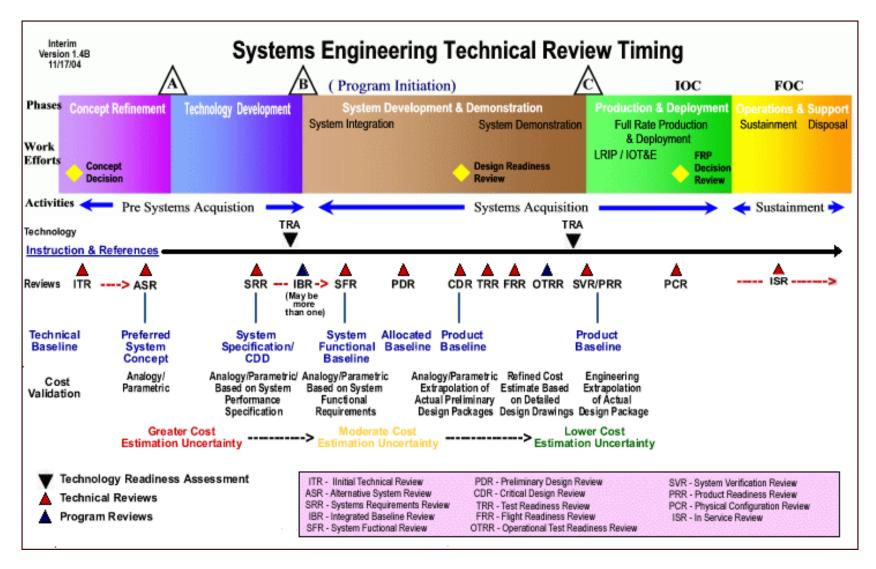


- Key focus area for ASN (RDA)
 - Software systems are inherent in the systems we acquire
 - Major impact on cost, schedule, and performance
- ASN (RDA) objectives:
 - Increase leadership awareness and accountability
 - Improve practices and disciplines
 - Critical few
 - Develop a skilled workforce
 - Improve Software Systems Development and Acquisition
 - Maximize software reuse (architectures ↔ code)
 - Reduce cost and schedule impacts
 - Rethink the business of acquiring
 - Open Architectures
 - "Product Line" strategies



Systems Engineering Review Process

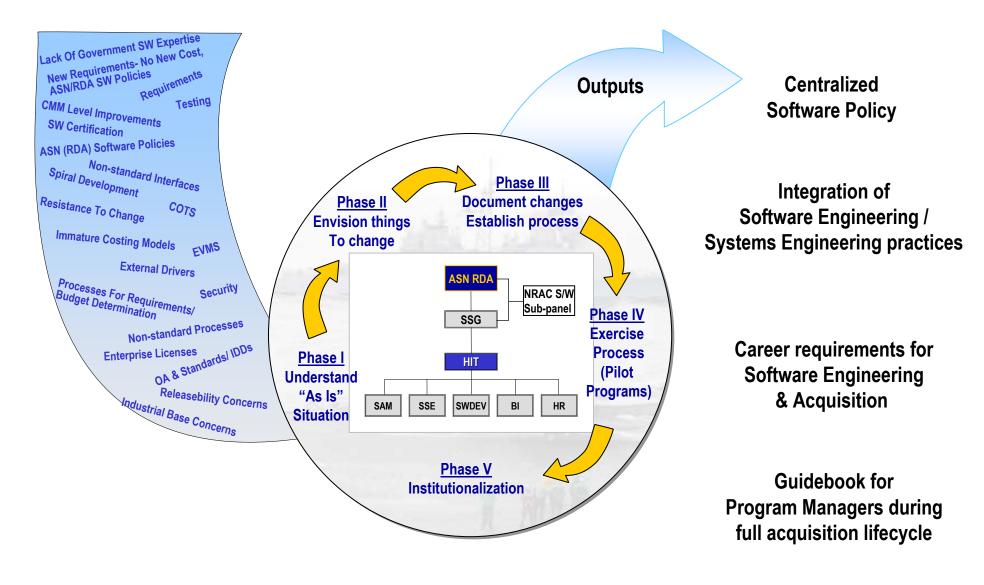






SPII Approach





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Modeling and Simulation



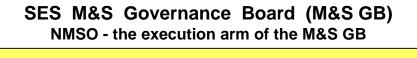
- Modeling & Simulation Governance Board created to coordinate and resolve issues between and across M&S user communities
- Promote commonality, interoperability, and alignment of M&S capabilities
- Resources used to work across, between, and within M&S user communities
 - M&S QA, M&S guide for Program Managers, Fleet
 Training, Educating the Workforce, Acquiring Joint
 Capabilities, Campaign Model, etc



Navy M&S Framework



- Organized by Communities
- Structured to support the Users and Developers



Acq & T+E ASN(RD&A) DASN(RDT&E) Analysis N8 N81B Training FFC N7B

Common and Cross-Cutting M&S Tools

Common and Cross-Cutting M&S Data

Common and Cross-Cutting M&S Services

Goals:

- Efficiency
- Interoperability
- Reuse

FAMs / Resource Sponsors

N1, N2, N3/5, N4, N6, ONR, Oceanographer



Technology Protection



- Protect our technological edge from potential adversaries
- Safeguard our research and technology interests
- Research and Technology Protection (RTP) Charter was signed in August 2006 by ASN (RDA) and Director, NCIS
- Identify and resolve issues associated with RTP:
 - Between Acquisition / Development, Counter Intelligence and Investigative Security communities
 - Standardization of Policy and Practices
 - Training / Education / Awareness
 - Classification
 - Collective Resource Utilization
 - Information sharing



In Summary



