



DEPARTMENT OF THE NAVY
CHIEF OF NAVAL OPERATIONS
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WASHINGTON DC 20350-1000

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1 Aug 13

MEMORANDUM

From: Chief of Naval Operations

Subj: MANDATORY NAVY KEY PERFORMANCE PARAMETERS FOR COST,
SCHEDULE, AND SPACE, WEIGHT, POWER, AND COOLING MARGINS

Ref: (a) SECNAVINST 5000.2E
(b) DoD Instruction 5000.02
(c) CJCSI 3170.01H

Encl: (1) Guidance for the Development of Key Performance
Parameters for Cost, Schedule, and Space, Weight,
Power and Cooling Margins

1. This memorandum establishes the direction, responsibilities, and procedures required for the development of Key Performance Parameters (KPPs) for cost, schedule, and space, weight, power, and cooling (SWaP-C) margins. This memorandum is directed to Navy Program Resource Sponsors, supported by Program Executive Officers, Program Managers, and Direct Reporting Program Officers charged with developing Navy platforms, payloads, and systems.

2. This memorandum will be cancelled when superseded by revision, canceling memorandum, or incorporation into reference (a), and applies to all Navy acquisition programs, regardless of acquisition category (ACAT).

3. Reference (a) provides policy governing the Department of the Navy operation of the Defense Acquisition System (DAS) and the Joint Capabilities Integration and Development System (JCIDS), as prescribed in references (b) and (c). The goal of this memorandum is to improve the Navy's focus on attributes that will be increasingly important in the current and emerging fiscal and security environment. First, enforcement of cost and schedule requirements is essential. Placing these attributes on par with traditional performance attributes will encourage trades between cost, schedule, and performance to deliver programs within likely fiscal constraints while remaining relevant to emerging threats and opportunities. Establishment of SWaP-C requirements will help ensure new platforms begin with sufficient - and clearly defined - design margin. This will enable platforms to accommodate new payloads or other systems needed to remain relevant as new threats and opportunities emerge over the platform's life.

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4. Responsibilities

a. Deputy Chief of Naval Operations for Integration of Capabilities and Resources (OPNAV N8):

(1) OPNAV N8 is responsible for providing direction to the program sponsor regarding Cost and Schedule and SWaP-C margin KPPs. In general, KPPs will be established for these parameters unless the Navy is making a deliberate decision to accept risk in these areas to pursue other objectives within the program. Enclosure (1) provides additional guidance.

(2) In accordance with reference (a), OPNAV N8 is the approval authority for the KPPs directed in enclosure (1) for ACAT II and below programs with a Joint Designator of Joint Integration, Joint Information, or Independent.

(3) OPNAV N8 is the sole authority for recommending individual program exceptions to CNO regarding the policy contained in enclosure (1).

(4) OPNAV N8 will ensure these mandatory KPPs or KSAs are included in the instructional modules for the OPNAV Requirements Officer Course.

b. Program Resource Sponsor (OPNAV N1, N2/N6, N4, N89, N9):

(1) The Program Resource Sponsor is responsible for developing the cost, schedule, and SWaP-C margins KPPs, in accordance with enclosure (1).

(2) The Program Resource Sponsor is responsible for reporting status on compliance with these and all other KPPs and KSAs at each Resources Requirements Review Board (R3B) or Navy Capabilities Board (NCB) for their programs.

(3) The Program Resource Sponsor will use cost estimates developed by the appropriate cost analysis organization as detailed in enclosure (1), and shall actively monitor cost and schedule progress. The sponsor shall also ensure that the appropriate SYSCOM Technical Warrant Holder develops and/or concurs with the proposed SWaP-C margins.



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Distribution:
ASN (RD&A)
OPNAV (N1, N2/N6, N3/N5, N8, N9)

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**GUIDANCE FOR THE DEVELOPMENT OF KPPs FOR COST, SCHEDULE,
AND SWAP-C MARGINS**

1. Purpose. The purpose of this document is to formalize the guidance for Resource Sponsor development of Key Performance Parameters (KPPs) for Cost, Schedule, and Space, Weight, Power and Cooling (SWaP-C) Margins in Joint Capabilities Integration and Development System (JCIDS) documentation for Navy programs.

2. Cost and Schedule KPP Policy. The intent for establishing Cost and Schedule KPPs is twofold:
 - a. To drive discussion of the trade space available in a program between required capabilities, costs, and time.

 - b. To ensure this discussion is realistically bounded by the amount of money that is projected to be available for the program, both within the Future Years Defense Plan (FYDP) and beyond.

3. Cost KPP Definition. In support of this intent, program cost KPPs shall:
 - a. Identify the appropriate procurement cost per unit for the program, such as Average Procurement Unit Cost (APUC), Program Acquisition Unit Cost (PAUC), or Lead and Follow Ship costs, based on applicable estimates, the projected number of units needed, the amount of money projected to be available, and non-recurring engineering costs.

 - b. Establish an objective value for unit cost at least 5% below the threshold value.

 - c. Explain clearly what constitutes a "unit" in the program. (This may be accomplished in the body text explanation of the KPP, and is not required to be in the KPP table.)

 - d. Explain how the Cost KPP was arrived at so that future users of the document may determine if a change is required. (May also be accomplished in body text.)

NOTE: Specific sources for cost estimates may include (but are not limited to): OSD CAPE Independent Cost Estimate (ICE), DON Service Cost position, or SYSCOM Cost Estimating Director estimate. Cost information developed in the course of the Analysis of Alternatives (AoA) process should also be considered as a source. Assessment of funds that will be available for the program should be tied to either the Future Years Defense Plan (FYDP), the 30-year Shipbuilding Plan, or the 30-year Aviation Plan (where appropriate).

4. Schedule KPP Definition. "Schedule KPP" shall use Initial Operational Capability (IOC) date as threshold; objective will be at least 6 months earlier. Program IOC will be defined as part of the KPP, to prevent changes in what constitutes IOC from being used as a way to change the requirement.

5. Implementation in JCIDS Documents.

a. Initial Capabilities Document (ICD).

(1) For new ICDs, program not-to-exceed cost "cap" and IOC need date shall be indicated (ICDs do not contain KPPs/KSAs). Resource Sponsor must consider the amount of funding projected to be available for the program (in the FYDP, 30-year plans, or both), historical affordability, cost estimates and projections, and projected fiscal environment and total obligation authority (TOA).

(2) Current, validated ICDs shall not be modified.

b. Capability Development Document (CDD) and Capability Production Document (CPD).

(1) For new programs, or new increments to existing programs, with a CDD or CPD in Navy or Joint draft/review, Cost and Schedule shall be KPPs.

(2) Current, validated CDD or CPD will not be modified until changes to existing KPPs or KSAs are required. This prevents additional review solely for cost and schedule parameter addition.

(3) If KPP changes are required to a current, validated CDD or CPD, add cost and schedule as KPPs.

(4) If non-KPP changes are required, add cost and schedule as KSAs.

6. Exceptions to Policy. For ACAT I or JROC Interest programs, the Chief of Naval Operations can authorize exceptions to the mandatory Cost and Schedule KPPs. For ACAT II-IV programs, OPNAV N8 may do so. Exceptions will be made only when the Navy is deliberately taking risk in cost or schedule to pursue some other more important strategic consideration. For example, a program that could introduce a capability that substantially changes the way we prevent and win conflict may have great cost and schedule uncertainty, but this risk may be worth the potential gain in capability or advantage. If cost and schedule KPPs are not established, they shall be KSAs.

7. Space, Weight, Power and Cooling (SWaP-C) Margins KPP Policy. The intent for establishing SWaP-C Margins KPP is to ensure that a platform's ability to accommodate evolving payloads over its life receives priority on par with other warfighting capabilities.

a. SWaP-C margins definition. SWaP-C will only be required to be defined as a KPP for platforms (ships, aircraft, and unmanned vehicles which will carry other payloads such as weapons or modular sensors). The amount of margin available in a platform will be defined in terms of cubic feet (ft³), square feet (ft²), center of gravity, tons (2,000 lbs), megawatts (MW) and British Thermal Unit (BTU).

b. Implementation in JCIDS Documents.

(1) ICD. ICDs shall describe the anticipated need for margin to address evolving threats and opportunities. This need will be described in terms of SWaP-C and related to projected changes in the fiscal, security, and technological environments.

(2) CDD and CPD.

(a) For new programs, or new increments to existing programs, with a CDD or CPD in Navy or Joint draft/review, SWaP-C Margins shall be a KPP.

(b) An existing, validated CDD or CPD will not be modified until changes to existing KPPs or KSAs are required. This prevents additional review solely for addition of the SWaP-C margin parameter.

(c) If KPP changes are required to a current, validated CDD or CPD, add SWaP-C Margins as a KPP.

(d) If non-KPP changes are required, add SWaP-C Margins as a KSA.

c. Exceptions to Policy. CNO (ACAT I or JROC Interest) or N8 (ACAT II-IV) may allow exceptions to the mandatory SWaP-C Margins KPP if the Navy is willing to deliberately accept risk in the area of margin for other, more important, reasons. An example may be a mature program (without a SWaP-C margin KPP or KSA) that is being modified to add a new capability that will use much of the remaining margin. The use of available margin in the existing program is the purpose for the KPP in the first place, so it would not be necessary to define the remaining margin available in the program. If SWaP-C is not established as a KPP, it shall be a KSA.

8. Monitoring and enforcing compliance.

a. Program performance against these requirements will be reviewed at every Gate Review and Navy Review Board (NCB or R3B). If projected cost increases more than 3 percent over the past year or since the last Navy Board or Gate Review, N8 will convene a review board (NCB or R3B) to consider mitigation actions to prevent exceeding the cost KPP. The Resource Sponsor will propose actions to mitigate cost increases or requirements changes for Navy Review Board consideration.

b. Earned Value (CPI, SPI, EAC, Cost to Complete) will also be reviewed during every Navy Review Board.

c. If the reported data date for the schedule parameter (s) has slipped more than two calendar quarters (six calendar months), OPNAV N8 will convene a Navy Review Board (NCB or R3B) to consider mitigation actions to prevent exceeding the schedule KPP. The Resource Sponsor will propose actions to mitigate or control schedule slippage or requirements changes for Navy Review Board consideration. Proposed KPP, KSA, and/or derived requirements changes will include the cost to implement and impact to program cost metrics.

d. If the reported value for the SWaP-C metrics indicates degradation in available margin by 10 percent or more before program IOC, OPNAV N8 will convene a Navy Review Board (NCB or R3B). The Resource Sponsor will propose actions to recoup or halt SWaP-C Margins reduction or requirement changes for Navy Review Board consideration. Proposed KPP, KSA, and/or derived requirements changes will include the impact to program cost and schedule.