

VISION FOR THE
2026
SURFACE FLEET

Commander, Naval Surface Forces | JAN 2014

From: Commander, Naval Surface Forces
To: Chief of Naval Operations

Subj: VISION FOR THE 2026 SURFACE FLEET

Ref: (a) CNO memo 3370 Ser N00/100065 of
1 Oct 12
(b) COMNAVSURFOR Itr 3030 Ser N00/S002 of
13 Nov 12
(c) Surface Master Plan (SMP) 01-14
(d) Cardinal Headings for Surface Warfare of
7 Jan 13

1. Since responding to reference (a) with my Vision for the 2025 Surface Fleet (reference (b)), I have continued to refine my thinking. At the risk of oversimplification, my vision is that the Surface Force meets its Title X obligation to be prepared to conduct prompt and sustained combat operations at sea in support of national interests over time. That distinction of meeting our commitments over time is significant, as it drives us to think about the future of surface warfare in terms that are larger than just the next budget drill or the next deployment. That is why in my previous letter, I talked about trajectories, the one we are on, the one we need to be on and what we need to do to get on the required trajectory. Understanding both the geo-strategic and budgetary environments in which we operate, we have the formidable task of reducing Total Ownership Cost while at the same time improving our combat readiness now and into the future. In this update, I offer a more comprehensive discussion of how we are getting onto that required trajectory, which is broken into three elements: Warfighting Ability, Sustainable Excellence, and Wholeness over Time.

Where We Are...

2. We cannot have a discussion of where the Surface Force is going without an understanding of where we are. Over the past year, the Surface Force has been constructing Readiness Kill Chains (RKC) for each ship class. This means that we have mapped and assessed the processes, from policy and requirements definition to deck plate execution, by which the Navy delivers Surface Force wholeness across each of the readiness pillars: Personnel, Equipment, Supply, Training, Ordnance, Infrastructure and Networks (PESTOIN). The data has confirmed what we long suspected: the Surface Navy is in a wholeness deficit as measured across the right side (our ships) of the pillars. There are both systemic and fiscal challenges which can be solved, but the solutions require investment across all the PESTOIN pillars to attain Surface Force Wholeness.



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We have made good progress since the "Take a Fix" effort and the Balisle Report, but the strong measures put in place have not had enough run-time to correct our readiness shortfalls. In addition, the RKC process has illuminated other structural challenges beyond just the realm of the Surface Navy which are preventing wholeness. All this means the surface force is not entering the POM-15 debates in a state of wholeness; that has yet to be achieved.

a. As I write this, we are actively moving forward with the Optimized Fleet Response Plan (O-FRP) concept. When implemented, OFRP provides a solid means to consistently achieve fully integrated combat readiness, it drives predictability into our schedules, and shifts to a supply-based model that produces the most forward presence possible for each level of resourcing provided. To fully realize the O-FRP, we must get after the challenges we've documented in the RKC analysis, and ensure the results go into our Surface Master Plan (SMP), reference (c).

b. The SMP is the operational plan, grounded in RKC analysis, which will help us implement the O-FRP and this strategic vision for 2026.

c. The following is a summary of common RKC findings across all ship classes, broken down by PESTOIN pillar, with the exception of Ordnance due to classification.



A fundamental challenge which cuts across all pillars is that, in many cases, we have different definitions of success between OPNAV, SYSCOMs and other entities on the left-hand (ways – perpetual) side of the kill chain and the deck plates. For example, 100 percent funding of the manpower requirement (green) at OPNAV results in approximately 85 percent manning on ships (red-yellow). Success in spiral development of C4I systems means inefficiencies in training, maintenance and logistics on the deck plates as 62 DDDGs have 42 different configurations when measuring just eight major Command, Control, Communications, Computers and Intelligence (C4I) systems.

(1) Personnel. The enlisted personnel distribution system is only designed to provide the “fair share” of an inadequate number of Sailors to man our ships. “Overages” in the individuals’ accounts (students plus transients, prisoners, patients and holdees) amounted to a monthly average of 7,960 Sailors over the past year, which translates directly to a lack of distributable Sailor inventory. The result of this lack of distributable inventory is a shortfall in manning and critical skills (Fit and Critical NECs) onboard our ships. One example of how this impacts our ships is that Surface Force resource sponsors have paid for all of the Chief Petty Officer billets on our ships, yet the Force has approximately 500 gapped CPO billets at sea on any given day. Perhaps the greatest shortfalls we have are with journeymen-level (PO1/PO2). While this is a readiness concern today, it also impacts the future readiness of our ships. Manning actions are required for many ships to deploy with the minimum critical skills onboard, and these “rip to fill” actions not only erode ship readiness for those ships at home preparing to deploy, but also erode the morale of the force. The

timing of these actions—just before deployment—also means that these Sailors don’t train with the rest of the ship or the strike group. The correct number of properly trained and experienced personnel, both military and civilian, is the Surface Force’s number one limiting factor across all the PESTO pillars, and our biggest operational risk factor. I fully support the O-FRP concept. Until and unless we correct this continuing problem, it will be our key limiter in implementing O-FRP across the entire force.

(2) Equipment. Improving shipboard technical expertise is required. Consistent manning shortfalls, past policies such as the Top Six roll-down and reduction of enriching shore tours, and the lack of defined professional career paths, have directly impacted E-pillar performance. Maintenance availability execution is plagued by growth and new work which drives increased costs and lost operational and training days – 11 ship-years in FY11 and 12 ship-years in FY12 from CNO availabilities alone. This is true for both CNO availabilities and Continuous Maintenance availabilities. Getting after these “missed” training days is another key to implementing the O-FRP. We must have predictable, sustainable delivery of ships ready to train in order to ensure the success of the unit readiness development process. Processes to improve material condition assessment and maintenance execution are in place including elements of the Surface Forces Readiness Manual – but we need run time and the right number of adequately trained and experienced Sailors and civilians which we currently do not have. End-to-end process discipline, contracting discipline and variance reduction are other areas of focus. Regional Maintenance Centers are under-manned, though we are beginning to



restore some manpower that was cut several years ago. New ship construction deficiencies (LPD 17, LHD 8, and LCS in particular) must be corrected after ships have entered the deployment rotation, resulting in bills that must be funded through fleet maintenance accounts and major schedule changes and interruptions that directly impact the crews' ability to train.

(3) Supply. Procurement (OPN-8) and SCN outfitting accounts are underfunded. The causes for the current OPN-8 underfunding were a failure to execute funds in past years and an 18-month gap in Automated Shore Interface (ASI) tape submission that understated the parts procurement requirement. Since ASI tape resumption, gross effectiveness numbers have increased, though they are still in the 50 percent range (five times out of 10, a Sailor can get the part they need from the storeroom to correct a casualty). Through the RKC process, NAVSUP has recognized the need for codifying the global spares management process resulting in more parts now being staged forward. Surface Force logistics are moving in the right direction, but we are still well below the OPNAV-defined standard of 65 percent gross effectiveness.

(4) Training. Individual training (as opposed to unit level training) is the top T-pillar challenge. Navy Training Systems Plans (NTSPs) have been neither properly updated nor properly funded across the Navy – from LSD 41/49 to DDG 1000 – for several years. For both, redeveloping our experience base

and executing the Surface Force Readiness Manual, future success depends upon planned ATG/RMC billet restorations. Training for LCS, so necessary to the success of the entire concept, is budgeted, but it needs to be defended in order to come to fruition. As with maintenance, we have instituted a solid process with our Surface Force Readiness Manual (SFRM), but it must be resourced (ATG manning is currently just over 50 percent) and given run-time to deliver the increased readiness this new process will deliver.

Where We Are Going...

3. Warfighting Ability: The Surface Force recently celebrated its 238th anniversary. We have a long history of service and are proud of the warfighting excellence we have provided to our nation. As we look critically at how we do business, we cannot escape the fact that deploying ships that can successfully execute Phase 0/1 operations and those fully prepared for combat operations are two different things. In recent decades, warfighting has not always had the focus it requires for us to meet our obligation to be prepared for prompt and sustained combat operations. It has my complete attention.

a. Warfighting excellence starts with training. Regardless of the force structure we have, we must be able to skillfully fight our ships, so we will continue to increase investment in the professional development of our people. The Surface Force of 2026 will not enjoy the overwhelming capability and capacity advantages of today's Force and so must be proficient and creative in operating weapons and systems. Our officers and enlisted personnel will be developed using a holistic approach with a deep, solid foundation in the basics of naval warfare and will be trained so as to have the cognitive agility to land on their feet inside a chaotic situation, pivot to the task at hand and carry the day.

(1) The Naval Surface and Expeditionary Warfare Command (NSEWC) will be the centerpiece of our efforts to improve our tactical competence across the full spectrum of mission areas in which we operate and improve the Surface Force's ability to maintain warfighting superiority in a changing world. NSEWC will be tasked with development, training and assessment of surface warfare tactics, tactical proficiency and tactical ca-



pability against adversaries from the individual to the task force level. The core of this effort will be a Surface Warfare Combat Training Continuum, which will codify the training and experience standards that our officers and certain enlisted will be required to meet as they progress through their careers.

(2) We have made a down-payment on this new investment by training our first Weapons and Tactics Instructors (WTIs). Our new anti-submarine warfare and integrated air and missile defense WTIs are starting to reach the fleet. These officers are being armed with the knowledge and skills to make immediate and substantive impacts on the tactical proficiency of their individual commands. Over time, we will populate the Surface Force with WTIs on all of our ships, and they will be responsible for ensuring we meet the standards codified in the core of our effort, the Surface Warfare Combat Training Continuum.

(3) If done correctly, I cannot over-emphasize the magnitude of positive cultural change that NSEWC can bring to the Surface Force. Our junior officers in particular join the Navy to be warfighters, and we must provide them a culture where tactical excellence is developed and maintained throughout a career, and where tactical excellence is an explicit discriminator for promotion. Nothing else we can do will have a more positive impact on the Surface Warfare ethos.

(4) The role of simulation in the Navy is too often viewed through one of two lenses: 1) as a cost-savings tool to reduce underway steaming costs, or 2) as a tactical training tool to provide better realism-in-theater environmental conditions, raid sizes, adversary capabilities-for our watchstanders. The role of simulation in the future of the Surface Force will be to use technological gains to both improve training and reduce cost for both tactical and technical endeavors. Initial estimates (not final results) for the high-fidelity LCS trainers are that once all of the high-fidelity trainers are in place in 2016, the number of underway steaming days required for crew certification will go from 39 days to 15 days, per work-up cycle,



per crew. For the Surface Force to be prepared for prompt and sustained combat operations over time, we must ensure that simulators provide environmental and combat realism, and that our simulation modernization leads our ship modernization. In the next year, we will further refine our 2011 simulation strategy to ensure alignment with Commander, Fleet Forces Command's 2013 synthetic training strategy, and support these concepts. Emerging technologies will enable cost savings and improved advanced tactical and individual training. This is a key component of maintaining our technical and tactical edge.

b. The Surface Force must greatly improve its offensive lethality. In recent decades, our surface combatant weapon systems have become predominantly defensive. Your "Sailing Directions" state clearly that we must deliver "credible capability for deterrence, sea control and power projection," so our current defensive posture must change. The Navy will not be able to fight its way into denied environments and maintain open sea lines of communication without the Surface Force being able to take the fight to the enemy in environments where air assets are not available or are unable to effectively or persistently operate. In a world where computing power doubles every 18 months, our primary anti-surface and anti-submarine weapons today are based on technology that is far older than most of the Sailors that operate them. Unfortunately, the acquisition system is not flexible enough to meet the technological realities of our day. The system currently in place evolved to be accountable, not agile. The success in making the acquisition accountable has come at the cost of diminishing the Surface Fleet's ability to successfully





conduct prompt and sustained combat operations in a rapidly evolving world. Weapons that could dramatically improve the lethality of the Surface Force are available in the near term, and, with the right support, I believe the Surface Navy could quickly and significantly improve the anti-surface and anti-submarine lethality of our ships in short order - without compromising accountability, and while reducing variance within our ship classes.

c. To meet our commitments to the American people over time, we are building within the Surface Warfare Enterprise (SWE) a systematic approach to developing ambitious Science and Technology (S&T) objectives, which can be translated into realistic Research and Development (R&D) projects and finally into weapons acquisition programs that enable us field credible, lethal offensive and defensive weapons that are affordable in quantities that enable us to win the wars we may have to fight. This is the key to keeping ahead of the threat over time, and next to training, investing in both S&T and R&D is the most important thing we can do to position the Surface Force for future excellence. The Surface Warfare Enterprise has not done well defining and prioritizing our S&T and R&D requirements, so we are instituting an enduring process for developing and prioritizing our needs. Whether we are in lean budget times or times of plenty, it is incumbent upon us to ensure that research organizations supporting us understand what we need, and spend money where it can do the Navy the most good over time. To generate the most effective lethality now and in the future, we must be willing to adapt and leverage

the work done by friendly nations. Our allies continue to field superb weapon systems and ships, and many of those allies have, for years, been forced to operate in what we would consider austere budget environments. For example, we have dramatically improved our mine warfare capability by taking this approach, and we can do much more in other warfare areas.

d. The success of LCS is dependent upon the success of the mission packages we field. We can get all of the new manning, maintenance, logistics and training concepts right, but we will not be successful if the ships do not meet your standard of credible capability for deterrence, sea control and power projection. As we work through the challenges of deploying and supporting these ships, we will turn ever more attention to the combat credibility of these ships. As previously discussed, the current acquisition system is not a complimentary enabler of the LCS concept of Rapid Technology Insertion, which LCS was designed from the keel up to enable.

e. The bulk of ships in the Battle Fleet were conceived and designed to meet the Soviet Cold War threat. They were built with capability and capacity that have enabled us to successfully adapt them to a rapidly changing world and mission sets. As we look at the ships we will need to replace these, we must design them with rapid change in mind. A ship class that is conceived today, enjoys a 20-year production run with an expected service life of 40 years, which is what we expect of our capital ships, will be 75 years old when the last ship decommissions. If Moore's Law holds, computing power will double 50 times during



that span, and that is but one factor that will change. For a ship that is conceived in 2013 to be combat relevant, as well as cost-effective, in 2088 requires us to think in terms of operational flexibility and modernization from the outset. PEO Ships, and other development and resourcing offices are doing great work on such ideas as Flexible-Modular ship design, and such thinking must be encouraged and put into practice. As with lethality, we will continue to look both internally abroad and draw from the smart ideas of our allies.

f. In future modernization, we must take into account usability, in addition to capability. Usability in this case is defined as the amount of capability features that can and reasonably will be used by operators. Nice-to-haves must be slashed. We are better off as warfighters with systems that we can use and maintain than we are with complex systems that cannot be operated effectively or maintained. Additionally, we must look at modularizing our warfighting packages and capabilities so that we can update or refresh a ship's ability to fight without having to take the entire ship off line for an extended period to do so. This makes both readiness sense and money sense over the life of a ship, but does require that we spend money up front.

g. Finally, we need to do better at stating and documenting our warfighting requirements and challenging optimistic assessments that understate the needs of the Surface Force. I am proud of the ability of the Force to generate the combat capability and capacity, and generate the mission success we deliver on a daily basis, with the share of the budget we receive – 67 percent of deploying ships for 33

percent of Navy procurement dollars, 26 percent of depot maintenance spending and fewer than 20 percent of the personnel; however, executing the GFM demand with this share of the budget has led to wholeness and lethality shortfalls discussed. We are engaged in an effort to more accurately state our warfighting requirements by developing a Surface Warfighting Requirements Group. Grounded in our RKC assessment, and reflected in our Surface Master Plan, this is an important thrust to ensure that our voice at the table is both clear and well-reasoned.

4. Sustainable Excellence: As stated in the "Cardinal Headings for Surface Warfare", "Regardless of the budget environment, the Surface Force will be judicious in its fiscal decisions to ensure the operational availability of our ships and systems across their expected service lives. Considering all platform and system decisions in the context of their total ownership costs is an ongoing imperative and may necessitate greater initial investments to reduce ownership costs over time. The reduced size of the Surface Force requires each ship to be more adaptable while leveraging technology to enhance agility across an expanding set of surface warfare requirements."

a. The Surface Force trajectory will be shaped by three primary fiscal goals: 1) drive down the cost per engagement over the service lives of our ships; 2) reduce the cost per ship, while still delivering the capability and capacity required to execute the maritime strategies that will evolve during the service lives of those ships; and 3) reduce total ownership costs of the surface fleet.

(1) Cost per engagement encompasses a wide range of factors. With defensive weapons, the idea boils down to sustainable capability and capacity. Further, out of necessity our defensive weapons have become more and more expensive to cope with the sophistication of potential adversary systems, which are, for many reasons, far less expensive than our own. As I have stated in the past, we must move beyond the missile as a defensive system for two reasons: the cost per engagement ratio vs. adversary weapons limits the capacity our nation can afford and missiles take up a lot of space, limiting the number of weapons that can be carried by ships. As a



result of these factors, our weapons development and purchasing trajectory must rebalance in favor of energy-based weapons for defense that will affordably deliver the capability and capacity required to conduct prompt and sustained combat operations through the coming decades. These systems must be scalable and modular, so as to enable employment on a range of smaller future combatants and back-fit on current ships-to include the amphibious Force-that we will modernize. We must arm our surface ships with offensive weapons that deliver credible capability to deter and defeat would-be adversaries. These are not contradictory aims. Expending a \$5-10M offensive weapon to defeat a \$100M enemy combatant makes fiscal sense, whereas shooting a \$20M SM-3 to knock down a \$1M enemy ballistic missile quickly becomes unaffordable.

(2) Cost-per engagement also includes soft kill. Culturally, the Surface Force is hard-kill oriented, but the quantity and quality of threat weapons that our forces will face in any future conflict necessitate better soft kill capability, constantly improving integration of hard and soft-kill capabilities, including cyber weapons, passive targeting and an emphasis on training that gives our warfighters the ability and confidence to use these systems. We have to move to energy weapons and soft-kill systems to get the capability and capacity we will require to fight effectively.

b. Cheaply built ships are expensive, but it is possible to build high quality, inexpensive ships. In the Surface Force, we recognize the shipbuilding funding limitations that are projected, and we cannot afford ships and systems that never break. What we can do, though, is understand the cost drivers and change how we approach procurement and sustainment. The challenge is succinctly stated in the Draft Operating and Support Cost Estimating Guide soon to be published by the Office of the Secretary of Defense:

“Decisions on program requirements, performance, and configuration made early in the acquisition process for the most part will determine a system's O&S costs. The opportunities to reduce O&S costs diminish as a program advances through the phases of the

acquisition process. However, as a program matures, it nevertheless remains necessary to continue to track and assess O&S costs and trends to ensure that the program remains sustainable, affordable, and properly funded. For these reasons, beginning with program initiation, and at each subsequent acquisition decision point, O&S cost estimates are needed to support various analyses and reviews throughout the program life cycle.”

(1) This idea of designing for affordability such as was done for the Virginia Class is not new, but it has not been rigorously applied across the Surface Force. What we aim to do with this idea in the Surface Force is to not only make our ships more affordable over the entire lifecycle of the ship, but to design them in such a way that they also deliver better combat capability and capacity over time by making modernization quicker, easier and less costly.

(2) All of the ships we build, from the littoral combat ships, to DDG 1000, to our multi-purpose amphibious assault ships, must absolutely be built to win in major combat operations. At the same time, we must recognize as we buy, build and plan to operate our ships that the great majority of their operations over expected service life will be in Phase 0/1 operations. The standard missions we have executed on a daily basis for 238 years-maritime security, sanctions enforcement, freedom of navigation, anti-piracy-will be the missions our ships execute better than 98 percent of the time. The key is being able

to promptly ramp up to major combat operations and sustain that effort for as long as it takes to win the war.

c. To begin attacking Total Ownership Cost, the Surface Warfare Enterprise is breaking total costs into major drivers that can be attacked and reduced. As with the simulation strategy, our aim is to reduce Total Ownership Cost with the goal of both reducing cost and improving our combat readiness. We have broken this effort down into four main thrusts for the future: Condition-Based Maintenance Plus (CBM +), variance reduction, controlling manpower cost, and future ship construction.



(1) Condition-Based Maintenance Plus (CBM+). Our ships and their component pieces will all break at some point. As we cannot buy ships and systems that deliver 1.0 operational availability (Ao) to meet our requirement of prompt and sustained combat operations, we must manage the downtime of those ships and systems, as well as control the costs of maintenance. Many of our systems, for example, were purchased with a standard of .85 Ao, which means that an average of four days of each month, those systems will be off-line for preventative or corrective maintenance. Our goal is to drive those four days of maintenance to happen when we need them to (during scheduled in-port maintenance periods), to avoid open-and-inspect maintenance, and to intercept impending equipment failures and correct them before the casualties cascade and become more difficult to troubleshoot and repair.

(a) The ships that we have in the Force today have been built to incorporate elements of CBM, and, with proper planning, we can improve our ability to monitor equipment and intercept casualties through targeted modernization of cost-driving equipment. Implementing CBM principles means more than just paying for monitoring equipment. As was proven a decade ago on LSD 41 Main Propulsion Diesel Engines, changes in maintenance policies so that we break less equipment doing invasive, unnecessary inspections will also reduce costs and improve readiness.

(b) To truly implement Condition-Based Maintenance, we must build it into our ships from the keel up. We are doing this with LCS, and we will continue to refine our processes and systems with those ships and apply the knowledge we gain to all of our future ships. This requires an investment in off-ship data services, data analysis, and cost-avoiding maintenance recommendations.

(2) Variance Reduction. As mentioned earlier, the 62-ship DDG class has 42 configurations when counting only eight major Command, Control, Communications, Computers and Intelligence (C4I) systems. This is but one example of the configuration variance challenge in the Surface Force that ranges from high-level electronics, such as combat systems, C4I and engineering control systems, to the number of valves we carry in the supply system. Such variance causes huge inefficiency in maintenance, logistics, individuals training and

personnel distribution. The current level of configuration variance in surface ships is not sustainable from either a cost or readiness perspective, and must be reduced to manageable levels.

(a) Variance reduction must center on four basic tenants:

- How does the Navy plan future ship classes to be built with commonality as a priority?
- How does the Navy ensure modernizations, mid-life availability packages and other opportunities reduce in-service ship class variance to a manageable level?
- What systems should the Navy attack first?
- How will the Navy make the difficult choices needed to invest now in variance reduction to achieve a lower cost/more affordable force in the future?

(b) Commonality is an investment in our Surface Force and like any investment, it will have upfront costs; however, surface wholeness and a reduced cost in total ownership by actions taken today will greatly benefit our Surface Force in the future. This situation took decades to develop, and I understand that it will take decades to fix. The Surface Force is partnering with Systems Commands, Program Executive Offices and the OPNAV staff to develop long-term strategies and implementation plans to reduce variance across the Surface Force.

(3) Controlling Manpower Cost. Our requirement for ships that are fully manned with skilled Sailors



will remain constant. We will continue to press for our ships to be manned with the correct number of Sailors to conduct our wartime missions beginning at the start of the basic training phase and not just-in-time for deployment, as is the current practice. At the same time, we do recognize that personnel costs are the largest single driver of total ownership costs, and Surface Force leadership recognizes the necessity to reduce personnel costs. What is critical is the process for reducing personnel costs, and the process of deciding how to distribute our Sailors most effectively from the readiness perspective. The totality of work required of our Sailors must be factored into our thinking. One of the primary lessons we learned from the Optimal Manning initiative is that ships do not become smaller or rust less or break less often just because we have removed Sailors. We also learned that unless you change the rules of the system, and examine long term effects, you are merely shifting costs, not saving money. With LCS, we recognize that the initial size of the core crew was too small to be sustainable, and we are increasing that crew from 40 Sailors to 50 Sailors. Going forward, we will fundamentally shift the way we approach reducing manpower by implementing the technological improvement or process change first, then reducing manpower, rather than removing Sailors and hoping that innovation will happen. Over time, we may need to adapt the way we train and retain our Sailors to develop a more technologically and tactically skilled and experienced force. As we implement technological and process changes, it logically follows that we must constantly review our personnel management methods and change them as necessary. We also must have major changes to the current distribution system to responsively support the Optimized FRP concept, or we will end up with haves and have-nots within the Surface force. Distribution must be linked to the operational schedule, sophisticated enough to determine

where to place each person to get the most readiness bang for the buck right now, and far-sighted enough to place Sailors in viable career tracks for sake of the future force. Billet based distribution is a big step in the right direction, but we also need to ensure we are getting the maximum operational and unit readiness out of each distribution decision.

(4) Future Ship Construction. While we have been able to maintain the combat relevance of our aging ships over time, this has come at a great cost in time and money. It is not unusual for a mid-life modernization to cost \$100M and remove a ship from the Force for a year. Building ships with modernization capability and capacity inherent in the designs will drive down the cost of upgrading and return those ships to the Force much faster. Our goal in the next 10 years is to be building ships that can be modernized "without a cutting torch." Modularity, common standards and interfaces will be the core of our efforts. Again, the lessons we learn bringing LCS into the Force will make our modernization strategies and implementing practices more effective in the coming decades.

(a) Some believe that reducing variance and modernizing ships quicker are contradictory. These ideas are not mutually exclusive. In fact, making modernization easier and implementing modernization efforts more quickly across the Surface Force will drive down variance and enable us to reap more benefits from ship alterations that attack cost drivers. For example, the Surface Warfare Enterprise recently reviewed the installation plan for the new Tactical Aid to Navigation (TACAN). The installation plan for a one-week installation was 10 ships per year, which would have taken until 2025 to complete. During the intervening years, the Navy would be required to maintain two training and qualification programs, two logistics chains and two maintenance support programs. We are re-examining that plan.

(b) Speeding up the process for modernizing individual systems will not lead to more variance. The appetite for incremental, continual modernization and an acquisition and budgeting system that values program health over ship class wholeness are primary variance drivers we are seeing on the waterfront. Our goal is to make ship class wholeness and warfighting effectiveness the priority in all of our modernization efforts. However, speeding up modernization for some programs in a budget constrained





environment will necessarily mean we have to make choices to choose some systems over other existing programs of record. The discussion about whether to install a modification or SCD must begin to take priority over the discussion about if we can install it. We're beginning to tackle those discussions as part of our Surface Master Plan effort.

(5) We will initiate a concerted effort to improve the efficiency and effectiveness of our ships through process and technology improvements: reducing the cost side and increasing the quality side of the time-cost-quality triangle. For example, weight test records are not electronically maintained but instead are held as paper copies in binders on ships, and Enlisted Distribution Verification Reports are still printed and validated manually in a world where when ID cards are scannable. We can do better and make our processes more efficient with investments in technology. In particular, we see great potential in harnessing the data we are collecting in our RKC effort, and we will seek more effective and efficient methods for exploiting the data to deliver a more effective Surface Force.

5. Wholeness Over Time: Over the last 2 years, the Surface Force has taken positive actions to establish mechanisms that will enable us to not only quantify our effectiveness but to look forward as a Force to identify flaws in our policies and plans, and to project readiness shortfalls. These mechanisms are:

a. Surface Master Plan. In November, we completed the first Surface Master Plan, and I am very pleased with the effort. The Surface Master Plan (SMP) is how we will identify risks and develop and implement mitigations to meet our operational commitments over time, more effectively and efficiently. Specifically, we are building the plan to manage transitions: from ship class-to-ship class, through major modernization efforts, through global laydown changes, from class wholeness deficits to class wholeness. It will give us

a tool to build and maintain an enduring, cogent plan that is thoughtfully resourced; show the context within which we will set priorities and identify tradeoffs; enable a routine examination of modernization & sustainment requirements to get ships to expected service life; and provide a forum through which we will make decisions to invest in future capabilities and reduce ownership costs. It's how we will collaboratively keep track of and raise the transparency of the many complex decisions that go into a force-wide view of scheduling.

b. Readiness Kill Chain (RKC). This is how we define and assess aggregate class and force readiness using your wholeness standard. We are executing round two after improving the rigor of the Bases for Measurement across all of our pillars. We will use these RKC results to update individual ship Class Execution Plans and the entire Surface Master Plan twice a year. The Surface Force is treating the RKC as a smart tool to identify and prioritize barriers to readiness and as an enduring method for assessing the health of the force, identifying and correcting readiness degraders at the systemic level. To properly take advantage of the data that is being compiled in the RKC will require an investment in analytical capability for the express purpose of understanding data currently available and effectively resolving readiness barriers. We know several fundamental areas where we must take action.

c. People. The professional development of our senior enlisted leaders remains my highest priority as the Surface Community leader. Investing in our people is an absolute requirement, regardless of force structure. In fact, our experience with reduced crew sizes has shown that as the number of Sailors on a ship goes down, the more skilled and experienced each remaining Sailor needs to be.

(1) As stated in reference (d), Cardinal Headings for Surface Warfare, Ships are designed to operate with a specific number of Sailors. We will man our ships to the required number of personnel possessing the required skill sets. Since manpower is the largest single cost-driver for the Surface Force, we will seek to drive down the required number of Sailors on ships through technical innovation and alternative concepts associated with at-sea operations. Technological change comes first, and then the manpower is reduced. We will no longer reduce manpower first, hoping that innovation will follow. To this end, I have formally rescinded the rule sets that led to the shipboard manning reductions of the last decade. As already discussed, I am encouraged by the recent efforts of the Navy Personnel Command to implement billet-





based detailing. I expect the fleet to reap efficiency and effectiveness rewards from this effort in the coming years, given that it delivers on the promise of the right people in the right numbers at the beginning of unit training to support combat-ready ships and the O-FRP.

(2) Experience. Experience has no substitute, and we have not paid enough attention to this critical factor in our Force shaping efforts in recent decades. That is changing. For example, we will continue our efforts to send Sailors to enriching shore tours, such as Regional Maintenance Centers and Afloat Training Groups. Professional development of our Sailors is a vertically integrated endeavor. Each duty assignment, including shore tours, must build on the previous assignment and add to the overall development of a leader who has the technical and professional experience required to lead Sailors to success in an ever more complicated environment.

(a) To this end, we have been working with, and have received great support from the Navy Personnel Command to map recommended career assignment paths for key senior enlisted positions. We started with the senior engineering leading chief petty officers ("Top Snipe") and Combat Systems Maintenance Managers (CSMM), to map the assignment paths for all of our key senior enlisted positions. We expect a lot out of our chiefs. In return we owe to them the opportunity for experience and training throughout their careers to succeed in these challenging sea-going roles. When our chiefs do well, the Surface Force does well.

(b) We are also making shifts in where we detail our officers that will lead to a community that is more experienced in current fleet practices and tactics. We are implementing a "SWO Clock" to limit the amount of time our officers spend away from the waterfront between their sea tours. With the SWO

Clock, we are returning officers to "production" jobs at such commands as Afloat Training Groups and NSEWC. Officers who have been supporting ships on the waterfront while on shore duty are better leaders and managers when they return to sea.

(3) Training. Arguably the most important finding in our Readiness Kill Chain effort was that we documented how far we have fallen behind in individuals training. With the expanded Surface Warfare Enterprise construct and the Surface and Expeditionary Training Committee, we have the organizational structures in place to make significant progress against this shortfall.

While the current state of our individuals training is not where I want it to be, I do see a great opportunity for the Surface Force to take advantage of readily available technology to improve the effectiveness – and cost effectiveness – of our training. The direction we are heading in LCS with virtual reality training, where Sailors can train in a broad range of realistic scenarios in an accurately simulated environment, is where I intend to direct the Force.

(a) With unit level training, we continue to implement the Surface Force Readiness Manual (SFRM). Results we are seeing through the first year and a half of execution are very positive. We continue to add trainers to our ATGs, so that all facets of the SFRM and the Surface Force Exercise Manual (SFEM) can be fully implemented. Further, we are focusing the attention of the SWE on the basic training phase, so we can understand the quality of ship we are generating through the basic phase and give us objective shortfalls to target. One result of our maintenance period overruns is that our ship training periods are compressed, which means that they are less effective. I cannot over-emphasize how important it is for our ships to receive the required time – 24 weeks – to complete their basic phase training. The Surface Force will continue to defend the full 24-week basic



training phase requirement as an enabler of OFRP.

d. Maintenance. In reference (a), you directed the Surface Force to create and execute a rigorous maintenance plan for each class of ship to ensure that the ships reach expected service life. Each class of ship now has a class maintenance plan based on technical foundation papers, and each ship has a ship sheet, by which we account for every required maintenance action. Our own metrics, corroborated by the 15OCT2013 quarterly INSURV Quick Look, show that we are executing the class maintenance plans to 93 percent. We are doing well executing the plans, and NAVSEA is examining how we can improve our accomplishment rate of this critical work. As we execute these plans, we will document a more accurate picture of the material condition of our ships, which will enable the Surface Force to more clearly define our funding requirements and more effectively execute our maintenance periods.

(1) As we have learned, "saving" money by not doing maintenance in the short term does not save money. It defers payment and increases costs over time. Most importantly, we must maintain a firm, steady-strain approach to maintenance to maintain our combat readiness and to be good stewards of taxpayer dollars.

Finally, a steady-strain approach to maintenance and level-loading the private shipyards is critical for the long-term viability of the ship repair industry, as well as for controlling short term costs. Without consistent, predictable business, our industry partners are unwilling to invest in the needed infrastructure to maintain our ships over time.

e. Surface Warfare Enterprise (SWE) Realignment. This past month we also completed the realignment and expansion of the SWE to fully exploit the potential of the RKC, and sustain the SMP effort. We have teams for each of the PESTOIN pillars, led by the cognizant Navy flag officer, that cover the full kill chain from policy writing through resourcing and

on to deck-plate execution. We have established Current and Future Readiness Cross Pillar teams to ensure we are producing integrated assessments and integrated solutions across all of the PESTOIN pillars. Our Ship Program Managers, Resource Sponsors, in-service support organizations and cross pillar teams are working together on class and master plans. In doing so, we have transformed the SWE from what was perceived as an extra-curricular activity to an integrated organization with the breadth and depth to produce the transparency and discipline required to improve our readiness generating processes and make the best decisions for the future of the Surface Force.

6. Conclusion: I remain excited by the challenge of shaping the Surface Fleet of the future, and we have made a great deal of progress in the last year instituting the mechanisms that will enable us to put and keep the Surface Force on the right trajectory into the future and meet our obligation to be prepared for prompt and sustained combat operations over time. From necessity, we are improving our cost effectiveness today, but we are devoting great effort into making ourselves even more cost effective in the future, to be good stewards of our nation's treasure – regardless the budget environment. We are going to succeed at the formidable task of reducing Total Ownership Cost while at the same time improving our combat readiness now and into the future.

a. Despite the budget pressures we are facing and will face, I still see this time as a period of opportunity. This is the time for us to invest the intellectual capital required to make smart decisions that will pay off over time and position the Surface Force to invest intelligently when the budget environment swings to more favorable funding levels. With disciplined, sober thinking and an eye to building on our current force and superb history, we will remain the pre-eminent global naval force for decades to come. I ask your full support in this endeavor.



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