# Top 10 Product Support Logistics Services Provided Prove High Sustainment Phase Readiness Result Fiscal Benefits

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Readiness is contingent upon having spare parts and trained aviation maintenance Marines to fix our aircraft. Our focus is on if have the right people with the right leadership and skill sets in positions of authority and responsibility. We are a very young force operating on the most technologically advanced aircraft in the world.

Challenges to achieving solid sustainment results include resource constraints, competing priorities and disagreement on how to best incorporate Site Visit Executive guidance into Training Doctrine so Skilled Troop Groups can be best utilised. We have a high turnover rate; essentially, we have an entirely new maintenance department in every squadron every four years.

Competing Priorities contribute to Sustainment goals not being reached in part because long-term planning is sacrificed for short-term performance expectation to include problems in continuity of Team expertise. For our Marines to remain competitive for promotion within their specific pipelines they are required to move and perform different jobs outside their primary MOS. In specific aviation communities, this created an “experience gap” at some of our supervisor levels because we failed to track and prioritise critical skills essential for weapons system sustainment supervisors; we are doing that now.

The hardest hit Group within Naval Aviation is the Strike Fighter community. To take action on immediate readiness issues such as low manning, long-term down aircraft, parts shortages and lack of facilities, we established "Rhino Readiness Recovery" team to identify and address long- term impacts caused by a lack of consistent readiness resourcing.

The team is a combination of subject matter experts from across the Navy and our industry partners who are tasked with solving systemic supply, maintenance, manning and facilities shortfalls that resulted from years of over-utilisation and underfunding.

Naval Aviation utilises a “tiered readiness” construct to ensure our resources are focused on deployed and soon to deploy squadrons. When a squadron returns from deployment, we are forced to take many of their aircraft, parts, and people and give them to the next squadrons preparing for work-ups and deployment.

To put this in perspective, in order to properly man the required Carrier Air Wings either on deployment or preparing to deploy at mandated levels, we do not have enough Sailors left to fill the two remaining Air Wings in their maintenance phases.

Due to these shortfalls, we have some squadrons only able to operate a single shift of maintenance when they should be able to run two. We've been forced to take risks in maintenance and production and, as a result, our ability to fix and produce up aircraft and therefore train aviators has been compromised.

Despite our best efforts to improve field-level aircraft sustain workload forecasts, we are not sure about how future maintenance & modification workloads may grow. The size of workload or category uncertainly of aircraft sustain grows with projection beyond ages at which military has typically operated aircraft no doubt part of deficits we have cited in established forecasting models. We have identified multiple factors such as new materiel consumption processes and operational functions influence on workload growth likely to emerge as aircraft fleets continue to be pushed past expected service life.

There is little doubt that the F-35 brings unique capabilities to the U.S. military, but without revising sustainment plans to include the key requirements and decision points needed to fully implement the F-35 sustainment strategy, and without aligned funding plans to meet those requirements, DoD is at risk of being unable to leverage the capabilities of the aircraft it has recently purchased. Furthermore, until it improves its plans, DoD faces a larger uncertainty as to whether it can successfully sustain a rapidly expanding fleet.

Site Visit Executive provides logistics, engineering and maintenance assistance to weapons systems operators and sustainers to resolve availability and supportability issues, to assist in making logistics and system metrics available, and in troubleshooting and for training especially during introduction of new or newly modified systems.

Modernisation to include creation of prototype and subsequent implementation to include battery of flight tests. Machine will have latest technical solutions taking into account use in combat operations. New machine will be able to provide flights under conditions of fire/info counteraction of hostile forces. The machine is equipped with modern integrated complex of on-board radio electronic equipment to provide 24/7 automatic flight pilot manoeuvre The air defence system offers protection against missile damage with radio and optical/electronic guidance.

Site Visit Executive supports the operation of large numbers of technology-based systems enabling technicians to perform electronic, electromechanical, mechanical maintenance, and communications support on deployed

technologies in difficult-to-support forward deployed field-level expeditions.

Marine Corps "Ship-to-Shore" Product Support Logistics Connections technology advances include Smart Sensors for capturing logistics information as materiel moves through the supply system to inform critical decision-making processes.

New techniques application to Process capability include automated receipt, issue, inventory, underway replenishment & vehicle tracking. These features enable Distance Support, the transit of workload from units afloat to organisations ashore outside the theater with commensurate benefit to mission goals.

Moving logistics information to end users, e.g. Joint sea base is a significant step in achieving Total Asset Visibility, In Transit Visibility, Joint inter-operations & Common Operating Picture. Additional benefits include utilisation of multiple cross platform integrators.

Site Visit Executive maintains a professional logistics staff experienced in support of mission critical defense systems possessing diverse mix of military and industrial experience and is capable of providing a full range of equipment sustainment activities.

Site Visit Executive conducts Logistics Support Training Reviews throughout the acquisition process through the selective application of scientific and engineering principles to assist with the Integrated Logistics Support activities of supply; support equipment condition assessments; training and training equipment; facilities; design interface; maintenance planning; manpower and personnel; technical info, packaging, handling, storage and transit

In a recent system upgrade, Site Visit executive tasked staff with executing systems logistics requirements, led the effort to prepare system operations and maintenance [O&M] status updated, and supported the preparation and conduct of training courses for O&M of subsystem deliverables and their interfaces into the system.

Site Visit Executive, in conjunction with subsystem suppliers, created operator and maintenance tasks to identify required support equipment, numbers of spare and repair parts at the Line Replaceable Unit level, consumable and expendable materiel, and O&M procedures.

DoD reactive approaches to planning for and funding the capabilities needed to sustain the F-35 has resulted in significant readiness challenges—including multi-year delays in establishing repair capabilities and spare parts shortages.

DoD did not plan for and fund stocks of materiel requried to repair parts at the depots, incorrectly assuming materiel would be included as part of the contracts for establishing repair capabilities at the military depots. So DoD has had to fund and negotiate additional contracts for the materiel. Late requirements identification and lack of funding to support repairs for many components is not expected to be delivered to depots until months/years after tech capabilities to conduct repairs have been established.

Site Visit Executive promoted, updated and staffed the general maintenance concept in coordination with the vendors to define recommended support resources in sufficient detail to allow another contractor with comparable skills to assume O&M, support of the system, and sustain the system availability requirements.

Site Visit Executive has significant experience providing O&M support to DoD customers, providing trained and qualified personnel to support maintenance operations that range from normal preventive maintenance through depot-level repair.

DoD is set to focus more on sustainment of equipment, and plans to “double down and put emphasis on sustainment early enough to potentially change how dollars are invested.

DoD has under invested in sustainment. That creates a whole host of problems. “What we don’t want is for Apaches or Black Hawks to turn into bird nests in five years or a paperweight, and the only way that we can fix that is by making sure we’re having good, candid conversations with stakeholders up front.

So you might have plans in the works for 20 Black Hawks, but if you buy 18 then you can buy the sustainment for the next 10-15 years. So we’re trying to have these discussions early. DoD needs to focus on upkeep of existing goods, rather that getting “enamored with chasing the shiny object.

Equipment comes with a long tail of sustainment and training. Site Visit Executive has proposed putting new system in place where we can see the profile of sustainment, which is going to allow us to have the information to show ‘this is what you look like, this is what you bought into, this is the performance level, or this is where you need to contribute more.

Part of that pitch involves arguing that sustainment isn’t just about maintaining what you have, but opening up future opportunities. The argument is such that as those capabilities come online, the better maintained your equipment is, the better chance you have to load new technologies onto an older platform.

What we’re trying to do is make sure you have a sustainment portfolio in place that goes out 10, 15, 20 years, If we can get investing in sustainment right, that is going to take it to the next level.

Site Visit Executive, in coordination with existing product support sustainment contractors, implemented initial fielding plans and verified that the fielding plans, maintenance actions, and support structure aligned with state-of-the-art maintenance techniques.

Contractor is assigned task of integrating sustainment support for the system, including that for the F-35 supply line component factors, depot maintenance, and pilot and maintainer training, as well as providing engineering and technical support. According to programme officials, the establishment of the Hybrid Product Support Integrator is an acknowledgement that DoD needs to take a more significant role in providing sustainment support for the F-35.

Marine Corps has limited visibility into the support that the contractor will provide along with the actual costs for which the services are responsible, until after the contract is signed. Contract transparency concerns are complicated by the fact that the services are paying into shared pools for F-35 sustainment, and the costs they are being charged for some requirements—such as for spare parts—cannot be directly tracked to an item that the services own or support that is specifically provided to an individual service.

Already the most expensive weapon system in DoD history, these rising costs are particularly concerning because the military services do not fully understand what they are paying for. This puts us in a precarious position as critical trade-offs are considered that might make F-35 sustainment more affordable.

Without improving communication with the services to help them better understand how the sustainment costs they are being charged relate to the capabilities that they receive, the services may not be able to effectively budget for the F-35 over the long term.

DoD plans to enter into multi-year, performance-based contracts with the prime contractor has the potential to produce cost savings and other benefits. However, important lessons are emerging from its pilot agreements with the contractor that are intended to inform the upcoming multi-year contract negotiations. To date, DoD has not achieved the desired aircraft performance under the pilot agreements, but it continues to move quickly toward negotiating longer-term contracts—which are likely to cost tens of billions of dollars—by 2020.

Without examining whether it has the appropriate metrics to incentivise the contractor or a sufficient understanding of the actual costs and technical characteristics of the aircraft before entering into multi-year, performance-based contracts, DoD could find itself overpaying for sustainment support that is not sufficient to meet warfighter requirements.

Site Visit Executive provides logistics support to deployment/sustain phase test ranges critical to mission success and implements industry-standard purchasing programmes and procedures, accountability systems, and supply inventory operations during decision-making planning for deployment/sustain phase Test Ranges.

Current Navy Weapons Systems Sustainment Models usually incorporate scenarios where future supply support allocations tend to be extrapolated from historical mission requirements. These models are not flexible enough to predict upgrade/repair scenarios when there are significant changes to mission requirements e.g., mobilisation.

Maintaining very high readiness during carrier strike group post-deployment sustainment phase actually saves the Navy money later on, the service found, despite fears that budget constraints might hinder the Navy from making the most of that time in a ship's deployment cycle
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Under Navy Optimised Fleet Response Plan, a ship undergoes routine maintenance and modernsation, conducts pre-deployment workups, deploys overseas, and then comes home for a "sustainment phase" of as long as a year before heading back to the shipyard for more maintenance. Carrier strike groups in the sustainment phase could be sent back overseas for a full-length deployment in a major contingency, used locally for training, sent to respond.

When Optimised Fleet Response Plan was rolled out and first implemented, Navy officials worried that the sustainment phase wouldn't be properly funded and noted that the Navy had a poor track record of funding ships post-deployment. Operations and maintenance budget has been a major bill-payer for other needs, and ships just back from deployment could be especially vulnerable to budget cuts, they worried.

Readiness is as good or better than any deployed carrier out there. And the air wing was too. So that actually, when you keep the ship at a high state of readiness, when you come in for the planned incremental availability, you haven't thrown all these extra jobs into the work package there.

Of course this high level of readiness had an upfront cost. In the long run, spending a little bit of money like this actually saves you money. A lot of times that is not possible with the way the budget works but U.S. Fleet Forces Command prioritised this funding even during a continuing resolution to make sure carrier remained at peak readiness.

Still, aircraft carrier wing readiness is only one piece of the puzzle. The carrier was fully funded, and the air wing Flight Hour Program account was fully funded, but that shortfalls in areas like supplies and logistics led to airplanes that were not properly maintained and therefore could not fly.

So same attention applied to fully funding Logistics Readiness enabler accounts must be future priority for Navy.

Although field-level mission modeling/simulation has been used at military installations for a long time, the emphasis has always been on war-gaming simulation.

Site Visit Executive has illustrated the utility of modeling/simulation for military aviation logistics applications. Recent advances in modeling/simulation technology, especially in detailing supply line route connection quality for critical equipment components, have made simulation implementation easier because decision makers quickly identify scope of the problem, choose appropriate model to be utilised, and execute smart solutions.

Site Visit Executive provides logistics training through mobile training teams and Help Desk support, providing hands-on and remote logistics training by planning workshop demonstration objectives/activities, materials, points of instruction, and providing field training/instruction.

Site Visit Executive has designed “train-the-trainer” sessions to provide operator training in the field so rapid response capability is up to speed with the latest techniques to result in minimum down time and maximum utilisation of equipment.

Commanding officers submit self-critique reports to Site Visit Executive office for review and dissemination – a redacted version of the report is made available to serve as a reminder about the importance of uncovering operational risks and the planning, briefing, executing and debriefing process.

The Troops say that it’s a useful process for them to go through and identify what went wrong and to ask the most important questions of why did this happen.

It’s useful because it provides examples for training on their own equipment, so if one deployed unit had this issue, and then they go over with their teams in training sessions, it's a great tool to highlight potential recurring traps and do we have processes in place so we’re not going to run into this?

1. Support initial fielding of systems operations

2. Provide new equipment and refresher training

3. Implement Logistics coordination with end-use customer

4. Troubleshoot to component level if required

5. Diagnose spare parts system performance

6. Remove, replace and evacuate system components

7. Perform technology upgrades and system modifications

8. Stratify metrics for battle damage assessment/repair

9. Assist equipment end-users in implementation/operation

10. Coordinate with end-use customers on status reporting