CHANGE THROUGH EX-CHANGE INNOVATIONS

17 March 1997

Ideas are contagious. The new science of memes, or thoughts, says that memes evolve by natural selection in a process similar to that of genes in evolutionary biology. Effective, potent ideas are ones that out-propagate other ideas, ones best at self-replication.

That's the concept behind Change Through Ex-Change. DoN has good processes in place to share successes and lessons learned, but Change Through Ex-Change focuses on the ideas and innovations that our programs have applied, are working, and that they feel might be beneficial for other programs to try. While Change Through Ex-Change does provide visibility of our program successes, its focus is to provide a structured, creative environment to promote the ex-change of innovative ideas across all programs, across all ACAT levels.

DoN programs at every ACAT level (I through IV) were asked to submit two ideas, approaches, or process innovations that could be of assistance to other Navy programs. This document is a compilation of these innovative ideas, which are diverse in content and come from across the Systems Commands.

The Change Through Ex-Change Conference, held on 17 March 1997 in conjunction with Acquisition Reform Week, is a formal process to accelerate the exchange of these innovative ideas. During the conference, seven of these ideas are formally briefed out, followed by an opportunity for questions. Several times during the Conference, free time is allotted for one-on-one exchanges between participants. At the end of the Conference, each attendee is charged with informally continuing the exchange started in this formal setting.

The innovative ideas in this volume have been placed into 85 categories. These categories are alphabetically listed in the Table of Contents. On the first page of each category there is a list of the innovative ideas in that category. A complete listing of innovative ideas by title is in an Index at the end of the document. These innovative ideas are also available in DoD Deskbook, over the Internet [http://www.acq-ref.navy.mil] and on disk from the Acquisition Reform Office, (703) 602-0263 or 5506.

IMPORTANT NOTE: If you received this document electronically, the format will appear different from the professionally printed hard copies. The first page of each category will not have the listing of the innovative ideas for that category, most graphics have been eliminated, and the pagination may have changed. Some other formatting changes may have occurred during the conversion from WordPerfect to Word. Therefore, it is recommended that the user "regenerate" the Table of Contents and the Index. These changes are due to limited disk space, and because we did not want to "zip" a file that someone might not be able to "unzip."

Content

ACQUISITION PLAN 1

ACQUISITION STREAMLINING 3

ADVANCED TECHNOLOGY DEMONSTRATIONS 11

AWARD FEE CONTRACTS 13

BEST VALUE MANUFACTURING 14

CAIV 17

CDRL MANAGEMENT 25

CHANGE PROPOSALS 30

COLOCATION WITH INDUSTRY 33

COMMERCIAL BASED PERFORMANCE SPECIFICATION 37

COMMERCIAL CONTRACT ADMINISTRATION 39

COMMERCIAL SUPPORT 41

COMMUNICATIONS WITH INDUSTRY 42

COMPUTER BASED TRAINING 52

COMPUTER SYSTEMS 54

CONFIGURATION MANAGEMENT 56

CONTRACTING 64

CONTRACTING – ALPHA CONTRACTING 69

CONTRACTING – COMMERCIAL ITEMS 85

CONTRACTING – MULTIYEAR 86

CONTRACTING – NAVY EXCHANGE 87

CONTRACTING – PRICE ANALYSIS 88

CONTRACTING – PROPOSAL EVALUATION 90

CONTRACTING – REPROCUREMENTS 95

CONTRACTING – RFP DEVELOPMENT 97

CONTRACTING – SHIP DESIGN 101

CONTRACTING – SOURCE SELECTION 102

CONTRACTING – TEAMING 104

CONTRACTING – MILESTONE BILLING 106

CONTRACTING – RFP DEVELOPMENT 107

COTS 110

COTS – SPARING 139

COTS – TEAMING 140

DELEGATION OF AUTHORITY 142

DEPOT MAINTENANCE 143

DIMINISHING MANUFACTURING SOURCES 148

EARNED VALUE149

ENVIRONMENTAL 152

GOVERNMENT PROPERTY – TRADE-IN 154

GSA SCHEDULES 155

IDIQ CONTRACTS 157

INFORMATION SYSTEMS 162

IPPD 164

IPT 176

IPT – COMMUNICATIONS WITH INDUSTRY 192

IPT \ RQMT. EVAL. \ ADVANCED TECHNOLOGY DEMO. 193

JOINT PROGRAMS 195

JUST-IN-TIME INVENTORY 196

LECP 198

LIFE CYCLE COST 200

LOGISTICS SUPPORT 206

MANAGEMENT INFORMATION SYSTEMS 210

MANUFACTURING PROCESSES 219
MULTINATIONAL DEVELOPMENT 220
NDI 223
OPERATIONAL ASSESSMENT225
OPERATIONAL TRAINING 227
ORGANIZATIONAL MAINTENANCE 228
PARAMETRIC PRICING 230
PERFORMANCE BASED SPECIFICATIONS 232
PRODUCT DELIVERY 244
PROGRAM DOCUMENTATION – SHIPS 245
PROGRAM REVIEW 246
QUALITY MANAGEMENT 248
REQUIREMENTS DEVELOPMENT 251
REQUIREMENTS EVALUATION 252
REQUIREMENTS GENERATION 253
REQUIREMENTS GENERATION – IT 259
RISK MANAGEMENT 261
SERVICE LIFE EXTENSION 263
SINGLE PROCESS INITIATIVE 264
SOFTWARE REUSE 268
STATEMENT OF OBJECTIVES (SOO) 273
SYSTEMS ENGINEERING 274
TAILORING DOCUMENTATION 280
TEAM MAINTENANCE 282
TEAMING – COST ANALYSIS 284
TEAMING – DESIGN REVIEWS 286
TEAMING – PROGRAM REVIEW 288

TEAMING – SYSTEM SPECIFICATION DEVELOPMENT 289

TEAMING – TESTING 292

TELECOMMUNICATIONS INVENTORY MANAGEMENT 294

TEST AND EVALUATION 295

TEST AND EVALUATION – OPERATIONAL ASSESSMENT 306

TRAINING 308

VIRTUAL PROTOTYPING 309

ACQUISITION PLAN

Acquisition Plan

NAVSEA 703/602–8350 – phone
Fowlie, Wil 703/602–6328 – fax
AN/UYQ–70(V) Advanced Display System Fowlie_Wiley_P@hq.navsea.navy.mil
SEA 91W5
2531 Jefferson Davis Highway
NC2, Room 11N06
Arlington, VA 22242–5106

What program are you with?
AN/UYQ–70(V) Advanced Display System (ADS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Proposed Contract Summary Document (PCSD)

Give a description of this idea and how it fits in the program:
Develop a one page summary document to be approved by all major players in a proposed contract award. The summary document would contain the following:

A. The requirement, what you want to procure
B. The dollar amounts and split between services and hardware
C. The number of contract years
D. The contract details
1. CPFF, CPIF, T&M etc.
2. ID/IQ, Task Order
3. Hardware/Software only
4. Services only
5. Hardware/Services Mix
E. Required award date
F. Any other details that help give a complete picture of what you plan to procure and the contract vehicle you plan to use

How is it innovative and creative?
The PCSD would be somewhat informal but would inform all concerned about what you plan to procure and how you plan to procure it. Any disagreements about the planned approach could be discussed for a two way learning process and changes could be made to the PCSD. Finally after all differences are resolved the PCSD would be signed by the major players (Contracts, Small Business, Legal, Financial, Program Manager, etc). After the PCSD is signed the contract process could begin. Any later disagreements with the original signed plan would have to be fully justified. As far as I know there is no process like the one above to get the contract process started with minimum changes in plans and turf wars after the process has started.

How has this new improvement been applied?
When I worked at SPAWAR I used a process similar to the PCSD approach to get an 8(a) integration contract started. The contract was not awarded due to the SPAWAR BRAC move and the procurement will probably be done by a NISE activity.

What were the results and lessons learned in developing this improvement?
When a new contractual effort is started there is a lot of controversy about the best approach and usually the ground rules are changing as you try to get a procurement initiated.

What other information would help another program evaluate its applicability towards their program?

Any DOD program manager may want to procure items in a given fashion but may not know if other parts of his organization will agree with the approach. The PCSD is a somewhat informal approach to communicate and have a warm fuzzy feeling that the approach will fly before you start formal process.

ACQUISITION STREAMLINING
Acquisition Streamlining

NAVAIR 703/602–4212 – phone
Groff, LT Brian 703/602–4758 – fax
Interim Portable GPS for Passenger Carrying Aircraft groff@navair.navy.mil
PMW/PMA–187
Space and Naval Warfare Systems Command
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
The Global Positioning System (GPS) managed by the Navy GPS Program Office within the Space and Naval Warfare Systems Command (SPAWAR) Navigation Systems Program Code PMW/PMA–187.

What is the name of your new idea, approach, process innovation, or lesson learned?
Interim Portable GPS (IPGPS) for Passenger Carrying Aircraft

Give a description of this idea and how it fits in the program:
The IPGPS Program was directed by SECDEF to provide an interim GPS capability for all passenger carrying aircraft. It is intended to enhance situation awareness in certain situations for those aircraft that carry passengers and troops, which do not yet have an integrated GPS installation. The IPGPS provides either a commercial handheld airborne GPS receiver or a Precision Lightweight GPS Receiver (PLGR) to certain aircraft squadrons. The program was structured to provide an accelerated evaluation and procurement of the units and expedite distribution to the operating forces by the end of Calendar Year 1996.

How is it innovative and creative?
The Program made use of the spirit of acquisition reform and used some new acquisition initiatives to shorten the schedule and reduce the amount of acquisition documentation for the successful fielding and delivery of the IPGPS systems. Some of the initiatives used include: the use of a "Letter Operational Requirements Document (ORD)"; performance based specifications; and preference for commercial off-the-shelf systems.

How has this new improvement been applied?
The IPGPS Program covers the following aircraft: C–2, C–9, C–12, C–20, U/VP–3 (all using commercial handheld receivers) CH–53, CH–46, VH–3, VH–60 (all using the PLGR). The units have been distributed to the operating forces. Training and policy on the use of the systems and restrictions have also been promulgated. The major advantage of the initiative is the reduction in time for structuring, planning, evaluating, fielding, and delivering the system to the fleet. This is a fully documented DoD Acquisition within the new acquisition reform guidelines. The direction to implement this program was received on 26 APR 96. The first units arrived at operating units in the 3rd week in December 1996. This success story covers the delivery of a new operating capability to the fleet using non-emergency procurement measures in under 8 months. A fully documented ACAT IVM program from idea to reality in 8 months. This is the power of acquisition reform.

What were the results and lessons learned in developing this improvement?
Significant schedule reduction in the fielding of a fully documented ACAT program. Highlights include:

- Approval of Acquisition Approach received in 154 days.
- Program tested and recommendations documented in 3 weeks.

- RFP and contract actions completed in 60 days.
- Status of program briefed through OPNAV, ASN and DoD levels with concurrence received at each level.

Lessons learned on this program focus around the benefits of a well planned acquisition using new initiatives in acquisition reform. We have found that use of these initiatives can drastically reduce acquisition time and paperwork and provide new capabilities to operating forces quicker and with better capability than was previously possible before acquisition reform initiatives were implemented. The IPGPS program is an excellent example of the practical benefits of acquisition reform and the successful, intelligent application of acquisition reform principles and proven techniques by dedicated acquisition professionals.

What other information would help another program evaluate its applicability towards their program?
The acquisition documentation used during this program the corresponds to the ACAT requirements under acquisition reform were: Letter ORD, Acquisition tailoring Agreement, Acquisition Category IVM Request, Certificate of Urgency, CBD Announcement, Single Acquisition Management Plan, Environmental Safety and Health Analysis, Navy Training Plan, Integrated Logistics Support Plan, Program Life Cycle Cost Estimate, Tailored Test Plan, and a Risk Assessment. There were four review and approval briefings dictated by approval requirements. The last two review and approval briefs were bi-monthly. For a similar ACAT, this approach should prove successful and meet any of the requirements levied by FAR and other acquisition initiatives.

Acquisition Streamlining

MARCOR 703/784–2255x8061 – phone
Ashby, Eileen L 703/784–5610 – fax
C4I Directorate GM13 EILEEN L ASHBY@C4I@MARCORSYSCOM
C4I
2033 Barnett Ave., Suite 315
Quantico, VA 22134

What program are you with?
C4I Directorate
What is the name of your new idea, approach, process innovation, or lesson learned?
Financial Management Process Improvement

Give a description of this idea and how it fits in the program:
C4I working group along with members of DFM constantly looking at process improvement. The group implemented the use of a single Funding Acquisition Request (FAR) format for all appropriations. Forms could be transmitted electronically to DFM for action with signed document maintained in PM offices.

How is it innovative and creative?
It was the first time that one form was used for all appropriations in MARCORSYSCOM.

How has this new improvement been applied?
The FAR is being used throughout the Command.

What were the results and lessons learned in developing this improvement?
The Financial Management process is extremely cumbersome. Too many people own the process making it very difficult to effect a change. In this particular case, the form is too busy and hard to use. Electronic transmission does not always work because the LAN is not always working

properly and back-up documentation must be faxed to DFM. The fax does not always end up with the proper FAR.

A solution to this problem is to be discussed at the next Financial Management Process Team meeting. A recommendation would be to revisit previous fixes to problems we think we have solved to make sure they are working. In this case, we need to establish a back-up plan for when the LAN is down and a process for faxing FARs. I would recommend that we use only one Fax machine in DFM and that SOWs be labeled so that they can be linked to the FAR.

What other information would help another program evaluate its applicability towards their program?

Acquisition Streamlining

NAVSEA 703/602–7881 – phone
Cameron, Jack 703/602–5385 – fax
Strategic Sealift Program, PMS385 Cameron_Jack@hq.navsea.navy.mil
PMS308
2531 Jefferson Davis Hwy
Arlington, VA 22242–5171

What program are you with?
Strategic Sealift Program (PMS385)

What is the name of your new idea, approach, process innovation, or lesson learned?
Continue with contracting reform toward a more commercial approach and continue to develop alternative conflict resolution in order to streamline processes, save time, money and effort.

Give a description of this idea and how it fits in the program:
Efforts at reform and streamlining have been conducted within the Strategic Sealift Program from the very beginning. Because of the commercial nature of the Program, the PM immediately sought methods of streamlining contracts and processes. Program processes and procedures are under constant review for opportunities suited to further reform or streamlining. To the extent possible, contracts and contract documents have been streamlined to focus on the end result and procedures that do not contribute to the expeditious processing of these contract documents have been modified to better serve the Program. By using a team concept when issues arise, alternative conflict resolution can be used to resolve them quicker in a win-win mode rather than the previous method of long tedious letters and protests.

How is it innovative and creative?
By using more commercial type contracting, coupled with the basic alternative conflict resolution methods, a better level of trust can be established between contractor and Government. Having established the higher level of trust, win-win solutions are easier to develop and implement.

How has this new improvement been applied?
Application of commercial contracting is evidenced by the fact that the ships in the Strategic Sealift Program are classed by the American Bureau of Shipping and certified by the USCG and other regulatory bodies. To the greatest extent possible, contractor data submittals have been reduced in scope or eliminated. Retained requirements are measured against standard commercial practice and submitted in the contractor’s existing format where practical. Procedures are under constant review to determine where system improvements or technology advancements allow for more intelligent methods of conducting business.

What were the results and lessons learned in developing this improvement?

Reform and streamlining efforts have eliminated duplication of contractor deliverable items and reduced many other requirements. This has saved money and time for both the government and the contractors alike. Constant review of requirements identify streamlining opportunities that allow a limited staff to maintain effective control of four large shipbuilding contracts while reducing reporting requirements for the contractors and easing the paperwork burden on the government. The reduction in review/oversight has also contributed to a higher level of trust.

What other information would help another program evaluate its applicability towards their program?
The ever changing business environment and constantly emerging technology dictate that acquisition reform be a continuous process, and implementation requires a willingness to assume some degree of risk.

Acquisition Streamlining

MARCOR 703/784–2006x2741 – phone
Hanscom, MAJ Steve 703/784–5842 – fax
Lightweight 155MM Towed Howitzer HANSCOMS1@MQG–SMTP3.USMC.MIL
(LW155)
2033 Barnett Ave, Room 315
Quantico, VA 22134

What program are you with?
LW155 HOWITZER

What is the name of your new idea, approach, process innovation, or lesson learned?
Combine Dem/Val with EMD to shorten the approval/staffing process and maximize competition between competitors.

Give a description of this idea and how it fits in the program:
This strategy allowed us to take existing prototype howitzers from different competitors, test them proving that they met or could meet the requirements, compete each system against the requirement, and then select the best system in terms of cost, schedule, and performance for final development.

How is it innovative and creative?
Saves the government time and money.

How has this new improvement been applied?
This is the cornerstone of LW155 acquisition strategy.

What were the results and lessons learned in developing this improvement?
LW155 is on schedule and budget to deliver a major weapon system in five years from EMD contract to IOC.

What other information would help another program evaluate its applicability towards their program?
Viable competitors with the potential to meet requirements with minimal EMD. Cooperation and coordination with the fiscal and testing communities to meet aggressive testing schedules.

Acquisition Streamlining

NAVSEA 703/602–9032 – phone
Mills, CWO2 703/602–5847 – fax
NSW Acquisition MILLS_TOM_J@HQ.NAVSEA.NAVY.MIL
PMS340Z6
AP#2, Room 2010
2611 Jefferson Davis Highway
Arlington, VA 22242–5160

What program are you with?
Special Warfare Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Reduced documentation

Give a description of this idea and how it fits in the program:
Tailor program documentation prior to initiation of program.

How is it innovative and creative?
If parts of logistical documentation do not add to program, do not do it.

How has this new improvement been applied?
Use of NDI items require less documentation and testing (which has already been done by the manufacture).

What were the results and lessons learned in developing this improvement?
Cost savings were accrued by not doing unnecessary efforts.

What other information would help another program evaluate its applicability towards their program?
The key to this suggestion is the heavy use of COTS equipment that has a reasonably short life time.

Acquisition Streamlining

MARCOR 703/784–4287 – phone
Ruiz, Maj Dave 703/487–4399 – fax
Individual Equipment
PM CSLE–Marine
MARCORSYSCOM
Quantico, VA

What program are you with?
PM Combat Support & Logistics Equipment (PM CSLE) Individual Equipment
What is the name of your new idea, approach, process innovation, or lesson learned?
R&D contracting with production options

Give a description of this idea and how it fits in the program:
Buy larger quantities of test items, modify based on user tests, and then exercise production option.

How is it innovative and creative?
It eliminates a second procurement cycle prior to fielding and saves 10–18 months and associated cost.

How has this new improvement been applied?

On a variety of Individual Equipment contracts.

What were the results and lessons learned in developing this improvement?
Good commercial equipment is provided to the field in short time.

What other information would help another program evaluate its applicability towards their program?
N/A

Acquisition Streamlining

NAVSEA 703/602–5098 – phone
Schlegel, Tom 703/602–5105 – fax
Airborne Mine Defense Program Office schlegel_paul_t@hq.navsea.navy.mil
PMS210
Crystal Plaza 6, Room 926

What program are you with?
Airborne Laser Mine Detection System (ALMDS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Our new approach is called "Magic Lantern (Deployment Contingency)" or "ML(DC)."

Give a description of this idea and how it fits in the program:
ML(DC) is a Congressionally-directed effort which is using the Advanced Development Model (ADM) systems of the ALMDS program to provide the Navy its first laser-based mine reconnaissance capability.

Needed refinements were identified by COMOPTEVFOR during Developmental Testing, which were then incorporated as part of the ML(DC) effort. The ML(DC) effort also produced a Tactical Decision Aid software tool that was proactively developed on the Navy-standard TAC–4 computer, using JMCIS, for eventual integration with the MEDAL C4I environment.
This limited capability will be provided by HSL–94, a Reserve SH–2G squadron based at NAS Willow Grove, PA.

How is it innovative and creative?
ML(DC) is innovative and creative in that it recognizes that an important residual capability remained at the end of the ALMDS Phase I effort and captures that capability to bring it to the Fleet. By fielding the ML(DC) system, PMS210 has given the Fleet an important interim capability for use until the ALMDS program completes Phases II and III.

How has this new improvement been applied?
As discussed above, the ML(DC) capability will reside with HSL–94. This squadron will train with the system and be ready to deploy it in the event of conflict.

What were the results and lessons learned in developing this improvement?
The result of the ML(DC) effort is the early availability of an important new technology in the area of airborne mine countermeasures. ML(DC) has taken high-value residuals and turned them into a important, effective, fielded capability.

What other information would help another program evaluate its applicability towards their program?
N/A.

ADVANCED TECHNOLOGY DEMONSTRATIONS

Advanced Technology Demonstrations

NAVAIR 703/604–6210x2433 – phone
Converse, LCDR Mark 703/604–6281 – fax
F/A–18 Advanced Targeting FLIR (ATFLIR)
PEO (T)
1421 Jefferson Davis Highway
JP1/Room 820
Arlington, VA 22243–5120

What program are you with?
PEO (T), PMA–265, F/A–18 Advanced Targeting FLIR (ATFLIR).

What is the name of your new idea, approach, process innovation, or lesson learned?
Technology demonstration of ATFLIR prototypes at onset of E&MD.

Give a description of this idea and how it fits in the program:
The Government announced its intent to have the prime contractor, McDonnell Douglas Aerospace (MDA), run a technology demonstration at the onset of the ATFLIR program. Based on this intent and the incentive of a potential $1B production run, five supplier teams have developed prototype ATFLIR systems with their own funds. These systems are mature, flyable prototypes of the next generation (Gen III) FLIR technology.

How is it innovative and creative?
The technology demonstration with mature prototypes will permit the Government to:

a. enter the acquisition process at Milestone II
b. reap the savings of the competitors' internal investments
c. ensure MDA selects the most qualified supplier
d. assess the risk in the program's cost, schedule, and technical performance based on the maturity of the prototypes
e. assess the technical feasibility and affordability of the ORD requirements prior to contract award to the selected supplier
f. continue the CAIV process by assessing possible trades of life cycle cost versus performance

How has this new improvement been applied?
This idea has been approved by ASN(RD&A) in the acquisition strategy for ATFLIR.

What were the results and lessons learned in developing this improvement?
None to date. Results are yet to be evaluated; Milestone II is presently planned for Dec 97.

What other information would help another program evaluate its applicability towards their program?
In the case of the ATFLIR, an additional incentive for industry to make an investment in prototypes was the opportunity for the winner to "take all" and potentially sell advanced FLIR systems to JSF and foreign customers.

AWARD FEE CONTRACTS

Award Fee Contracts

NAVSEA 703/607–2753 – phone
Asher, Richard 703/607–2757 – fax
SRDRS asher_richard_c@hq.navsea.navy.mil
SEA 00C

What program are you with?
Documentation is available at CVX program office (Heitman Bldg. Suite PL412).

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of Award Fee type contracts.

Give a description of this idea and how it fits in the program:
Award Fee type contracts provide significant opportunity to enhance communication between the government and the contractor which is the key to success. The process requires continual feedback to the contractor and permits problems to be resolved at the earliest opportunity. The award fee discussions must be held on a periodic basis; monthly or quarterly.

How is it innovative and creative?
N/A.

How has this new improvement been applied?
We are using it on the development of the SRDRS with positive results.

What were the results and lessons learned in developing this improvement?
N/A.

What other information would help another program evaluate its applicability towards their program?
N/A.

BEST VALUE MANUFACTURING

Best Value Manufacturing

NAVAIR 904/772–2751 DSN: 942–2751x160 – phone
Koppenberger, Jim 904/772–2865 – fax
AN/ALQ–162 Electronic Countermeasures System
PMA272 Koppenberger.psd@navair.navy.mil@pmdf@corals
PEO(T)/PMA272J
Bldg 583
P.O. Box 122
NAS Jacksonville, FL 32212–0122

What program are you with?

TACAIR EW: AN/ALQ–162 Electronic Countermeasures

AN/ALQ–162 Electronic Countermeasures system is a Tri-service program with Navy lead. The ALQ–162 is used on fixed and rotary winged aircraft for self protection from surface to air and air to air missiles. Over 600 systems are in use within the USMC, US Army, USAF and several foreign services.

What is the name of your new idea, approach, process innovation, or lesson learned?

Best Value Manufacturing

Give a description of this idea and how it fits in the program:

In early FY95, the USAF and several foreign customers had acquisition requirements for thirty-two (32) AN/ALQ–162 systems. Faced with the first new contract under the Secretary Perry initiative for MIL–STD and MIL–SPEC elimination/reduction it became obvious that vendors of AN/ALQ–162 components and material had responded to the initiative by converting their production lines to commercial standard parts only. Along with these vendor changes, some AN/ALQ–162 components were obsolete and no longer available. These problems began to drive the need to redesign some AN/ALQ–162 assemblies resulting in schedule slip, increased acquisition costs and impacts to existing logistics.

Based on lessons learned from manufacturing over 4000 electronic warfare systems for the USN, USAF, US Army and other foreign and domestic customers, Northrop Grumman, Electronic Systems Integrated Division, Electronic Warfare Systems proposed to the government the idea of building the AN/ALQ–162 under a Best Value Manufacturing (BVM) approach and assurance method for the fabrication, assembly, inspection, test and delivery of the systems.

Through a government and industry teaming effort consisting of the ALQ–162 IPT, the Northrop Grumman Team and the Defense Contract Management Office located in-plant, the Best Value Manufacturing Plan was approved for production of the AN/ALQ–162. The plan is an alternative to the traditional high cost manufacturing of systems in place today throughout the military electronics community.

This plan:

- Places the responsibility for the quality of the piece parts that go into the assemblies on the piece part manufacturers, as equal teammates.
- Places the responsibility for the quality of the manufactured hardware on the manufacturing centers of excellence and the operators therein, as trusted members of the team.

– Reduces independent oversight, excessive data requirements, and other non-value-added costs.

– Does not change the specified performance required by the AN/ALQ–162 Specification (power levels, operating frequencies, vibration, operating temperature range, reliability levels, quality, etc.) for any of the piece parts, assemblies of the final system.

How is it innovative and creative?

The plan provides Northrop Grumman the management flexibility to determine its own control processes, oversight and data requirements starting with piece part and raw material ordering and ending with the presentation of completed hardware to the government for acceptance, while placing the overall responsibility of the end item for quality, reliability and performance as required by the AN/ALQ–162 specification with Northrop Grumman.

How has this new improvement been applied?

This plan applies to mature production hardware, with proven levels of quality, where streamlining can be imposed without affecting the quality of the products delivered. The BVM Plan is currently in use at Northrop Grumman's Rolling Meadows Facility for the production of the 33 ALQ–162 systems. And due to its success has been adopted as a manufacturing standard for production systems within that facility.

What were the results and lessons learned in developing this improvement?

As a result of the BVM Plan, redesign of AN/ALQ–162 assemblies was eliminated and the logistics impact was avoided. Acquisition costs for each of the 32 systems was reduced by $20K. This further allowed an additional system to be acquired to meet the USAF fielding requirements bringing the total to 33 systems.

Through January 1997, 12 systems have been delivered early to the government, representing contractual obligations through May 1997.

What other information would help another program evaluate its applicability towards their program?

This plan can be applied not only to production manufacturing but, also to development hardware, where streamlining can be imposed either based on similar program history or where BVM can be imposed to cost effectively facilitate the build of hardware (prototypes, engineering developmental models, etc.) for test and evaluation programs. The use of this plan for follow-on production for these programs would then be based on these test results.

The plan is not intended to cover the design phase of programs.

Teaming not only with the contractor but also with the in-plant government quality personnel to report problem areas is key to success.

CAIV

CAIV

NAVAIR 703/604–2100x5501 – phone
MacKenzie, CAPT T. L. 703/604–2896 – fax
AIM–9X MACKENZIETL.JFK@NAVAIR.NAVY.MIL
PMA–259
PEO(T)/PMA259
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
AIM–9X

What is the name of your new idea, approach, process innovation, or lesson learned?
Cost as an Independent Variable (CAIV)

Give a description of this idea and how it fits in the program:
The AIM–9X has been designated a Navy CAIV Flagship program. Application of the principles associated with this philosophy have provided substantive benefits to the program.

How is it innovative and creative?
Practical application of CAIV principles.

How has this new improvement been applied?
IPPD processes, minimum KPPs, cost-performance trades, aggressive price targets, procurement price commitment curve.

What were the results and lessons learned in developing this improvement?
At EMD award, turned $117M of RDT&E back in to DoD, getting back $75M in Procurement, facilitating an IOC one year earlier than previous baseline.

What other information would help another program evaluate its applicability towards their program?
Depends on Phase of the program, but CAIV principles always have some cost-saving potential.

CAIV

NAVAIR 703/604–2276, 7069 – phone
Caniglia, Ken 703/604–3003 / 2394 – fax
H–1 Upgrade Program
PMA–276
JP1, Room 610

What program are you with?
PMA–276 4BW/N Upgrade Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Award Fee performance element based upon Cost As an Independent Variable (CAIV)

Give a description of this idea and how it fits in the program:
CAIV is one of four performance elements to be measured in determining H–1 Upgrade Program award fees to the contractor. The CAIV parametrics are the following:

1. Provide DTC plan and 2 DTC reports,

2. Establish DTC targets for all IPT's,
3. Demonstrate control of DTC targets within all IPT's with the objective of reducing recurring production and O&S costs,
4. Demonstrate tracking system for flyaway cost and O&S cost,
5. Plan supplier outreach activities,
6. Conduct one DTC review, and
7. Develop and demonstrate CAIV savings tracking system. System should include backup documentation for specific areas where savings were achieved.

How is it innovative and creative?

CAIV performance will provide trade-offs that will enable the warfighter the developer and the supporter to facilitate meaningful trade-offs to arrive at an affordable balance among performance and schedule. These trade-offs will enable the warfighter to make choices that will provide the best performance from the system within available resources.

How has this new improvement been applied?

CAIV has been incorporated as an evaluation element to determine the contractor's award fee.

What were the results and lessons learned in developing this improvement?

The CAIV performance element was implemented into the H–1 Upgrade contract signed Nov '96 and is in place. However, the infancy of this initiative has yet to determine a definite outcome.

What other information would help another program evaluate its applicability towards their program?

CAIV White Paper from the Acquisition Reform Office published by Ms. Alex Dean Bennett. The White Paper is available on the Internet at http://www.acq–ref.navy.mil/wcp/civ.html

CAIV

PEO–SCS 703/602–7618 – phone
Fitch, CAPT David 703/602–8575 – fax
MIDS International Program Manager fitchd@smtp–gw.spawar.navy.mil
PMW–101
PEO–SCS
2451 Crystal Drive
Five Crystal Park
Arlington, VA 22245

What program are you with?
Multifunctional Information Distribution System – Low Volume Terminal (MIDS–LVT)

What is the name of your new idea, approach, process innovation, or lesson learned?
Program Manager's Tradespace

Give a description of this idea and how it fits in the program:
A Tradespace model was developed by the program office to communicate and emphasize the tradeoffs between cost, performance and schedule needed to field an affordable MIDS–LVT Link 16 system. This was accomplished in support of the "Cost As an Independent Variable" (CAIV) initiative. As development continues, areas where the contractor may have difficulty meeting performance specifications are targeted as "TradeSpace". A diagram of the MIDS CAIV Tradespace model is shown below.

How is it innovative and creative?
Redefinition of the "traditional" term customer satisfaction (which usually is interpreted to include whatever functions or performance potential anyone associated with the program requests) to include opportunity costs.

How has this new improvement been applied?
The program applied it to avoid spending $434,684 in the past 3 months. The expenditure would have supported provisions for additional functional improvements in the terminal's software design (IR#91 and IR#33). The additional improvements were not supported through customer input. The changes were not implemented.

What were the results and lessons learned in developing this improvement?
Achieving cost savings is possible in systems which have matured past Milestone II. Customer (defined as the end user) appreciation of costs (and opportunity costs) is critical in supporting all tradeoffs.

What other information would help another program evaluate its applicability towards their program?
Please see the MIDS–LVT CAIV Implementation Plan.

CAIV

NAVIAR 703/604–2860x8768 – phone
Shea, Debra 703/604–2405 – fax
Joint Emitter Targeting System (JETS) sheadl.ntrprs@navair.navy.mil
PMA0272B4
PEO(T)/PMA272B4
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: Joint Emitter Targeting System (JETS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Cost as an Independent Variable (CAIV)

Give a description of this idea and how it fits in the program:
Used CAIV in the Cost and Operational Effectiveness Analysis (COEA) by making performance and cost tradeoffs to determine the balance between the two elements.

How is it innovative and creative?
In the past, cost has been an output of a program after the performance and design have been established. CAIV allows cost to be an input rather than an output – thereby allowing a more affordable system to be developed.

How has this new improvement been applied?
During the JETS COEA cost was another input parameter for determining viable alternatives. In addition, we will apply CAIV throughout the development of the specification and into the EMD contract itself.

What were the results and lessons learned in developing this improvement?
In a world of reduced defense budgets and performance based specifications, the use of CAIV is imperative in developing an affordable system.

What other information would help another program evaluate its applicability towards their program?
Regardless of where a system is in its acquisition life cycle, CAIV can provide a tool to balance cost and performance.

CAIV

MARCOR 703/784–4287 – phone
Yapp, Capt Mark 703/784–4399 – fax
Military Tactical Vehicle Remanufacture (MTVR)
PM CSLE–MT
MARCORSYSCOM
Quantico, VA

What program are you with?
Program Manager Combat Support & Logistics Equipment (PM CSLE)
Military Tactical Vehicle Remanufacture (MTVR)

What is the name of your new idea, approach, process innovation, or lesson learned?
Cost As An Independent Variable (CAIV)

Give a description of this idea and how it fits in the program:
CAIV sets realistic cost objectives when defining requirements and managing achievement of these objectives. As system performance and cost objectives are traded-off, the process will make cost more of a constraint and less of a variable, while, nonetheless, obtaining the required system capability.

How is it innovative and creative?
Allows exchange, substitution or adjustment of requirements for the sake of another.

How has this new improvement been applied?
Currently being applied to ACAT II (2 Billion dollar) truck re-manufacture within Marine Corps.

What were the results and lessons learned in developing this improvement?
Enhances cost control
Promotes contractor innovation
Mitigates government risk

What other information would help another program evaluate its applicability towards their program?
N/A

CDRL MANAGEMENT

CDRL Management

NAVAIR 703/604–2860x8746 – phone
McKernan, CDR John F. 703/604–2405 – fax
AN/ALR–67E(V)2 mckernanfj.ntrprs@navair.navy.mil
PMA272B3
PEO(T)/PMA272
1421 Jefferson Dais Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: AN/ALR–67E(V)2

What is the name of your new idea, approach, process innovation, or lesson learned?
Ensure you validate all CDRLs on your contract especially with regard to medium of distribution and number of copies.

Give a description of this idea and how it fits in the program:
Too often when it comes to CDRLs we just say "what did we do last time". In one of our contracts from 1994, this became a problem in the last year or so as data submittals became delayed, difficult and expensive to the contractor due to the requirement by the gov't to provide hard copies to many different codes. Some of the documentation on this program was in excess of 10,000 pages and involved numerous revisions. Having to print multiple copies of all of those documents especially the revisions was unsat especially since some of the recipients did not really need the documents.

We have since gone and changed the CDRLs to reduce the number of copies required. Additionally, we have changed the medium to electronic media only for intermediate versions (the initial and final copies are done in both electronic and hard copy) and even then only required change pages.

How is it innovative and creative?
It is not really innovative or creative, it just applies some common sense and attention to detail.

How has this new improvement been applied?
The latest versions of some of the documents have been submitted in this manner and it works fine for review of intermediate versions.

What were the results and lessons learned in developing this improvement?
Scrub the CDRLs thoroughly to avoid wasted effort and money.

What other information would help another program evaluate its applicability towards their program?

CDRL Management

MARCOR 703/784–2645 – phone
Cordaro, USMC, CW04 A. J. 703/784–2655 – fax
Tactical Air Operations Module and Joint Tactical Data Systems
CIS
2033 Barnett Ave., Suite 315
Quantico, VA 22134

What program are you with?

Tactical Air Operations Module and Joint Tactical Data Systems

What is the name of your new idea, approach, process innovation, or lesson learned?
The Paper Less Contract Data Requirements List (CDRL)

Give a description of this idea and how it fits in the program:
Elimination of the paper associated with Contracts Data Requirements on a contract. This approach structured a contract to allow Contract Data Requirements to be "posted" on a Web Page vice delivered in paper format.

How is it innovative and creative?
All contract CDRLs are formally submitted via a Web Page. This elimination of the "paper" trail results in tremendous cost savings as well as complete elimination of all time associated with printing, mailing and distribution of CDRLs.

How has this new improvement been applied?
The Marine Corps Systems Command has a engineering contract with Litton Data Systems, Van Nuys, CA, contract N67854–96–C–2018. The scope of this contract includes engineering studies and evaluations primarily directed at ongoing and anticipated upgrades and enhancements to the fielded AN/TYQ–23, Tactical Air Operations Module.

On any contract, one of the most difficult and expensive items are the Contract Data Requirements List (CDRLs). Typically, these CDRLs are paper-based. Once they are finalized by the contractor, they are sent to the printers and are mailed to a long distribution list. Some of these documents exceed several thousand pages. And the cost associated with copying and mailing can be significant.
Additionally, the time associated with copying and mailing these documents adds unnecessarily delay. It takes time to copy, mail through the U.S. Postal Service or other mail delivery system. Then the documents need to work their way through the internal Marine Corps mail distribution systems. It can take upwards of several weeks to a month or more from the time that the contractor approves a document for release, until the document is actually in the hands of the individuals with the requisite knowledge to review the document.

The delay encountered copying and mailing the document to the Government is also encountered ion providing formal comments back to the contractor.

This team has constructed a simple and easy to use approach, whereby all contract CDRLs are delivered, comments consolidated, and a formal response is provide via a Web Page. This results in tremendous cost savings as well as complete elimination of all time associated with printing, mailing and distribution of CDRLs.

All contract CDRLs are formally submitted via a Web Page. The result is a tremendous cost savings as well as complete elimination of all time associated with printing, mailing and distribution of CDRLs.

An additional benefit of this Paperless CDRL approach, is that it greatly facilitates the Government review of these same CDRLs. Typically, individual CDRLs are provided to any number of functional experts. These experts review and provide comments to a central point of contact, typically the Project Officer. The Project Officer then must harmonize these various and sundry "opinions" with the contract requirements and the overall needs of the program. He then must provide a consolidated recommendation to the Contracting Officer, who must then provide a formal response to the Contractor regarding the acceptability of the CDRL.

The initiative of having all CDRLs "posted" on a Web Page also facilitates the review and development of a consolidated response of these same CDRLs. In fact, on the Web Page, the team has established a "tally sheet" that is continuously updated. This tally sheet provides the status of comments on individual CDRLs. This also allows the various Government expert reviewers to "post" their comments and recommendations on the Web Page. Therefore, the review, comments, and consolidation of Marine Corps comments on individual CDRLs is all done via the Web Page.

Finally, the formal government response is provided to the contractor via the internet.

This approach to paperless CDRLs is currently being used on contract N67854–96–C–2018. This approach has almost universal applicability. Literally, any contract that has data requirements, and all do, can utilize this approach to paperless CDRLs.

What were the results and lessons learned in developing this improvement?
There are low costs associated with developing and implementing a paperless CDRL capability on a contract. First, the contract must be structured to allow the contractor to post individual CDRLs on a Web Page. Second, a small investment must be made to set up the Web Page. In this case, CWO4 Cordaro did the proof-of-concept the work all himself, on his own initiative. He had 60 percent of the functionality demonstrated and provided guidance to a support contractor on the paperless development effort. Once the site was established, he turned the site over to the contractor for maintenance. These initial set up costs are minimal and simple and is part of their existing contractor support, doing away with the existing legacy paper tracking system.

What other information would help another program evaluate its applicability towards their program?
There are several features available with commercial-off-the-shelf (COTS) web development tools and Web browsers, which makes development of paper-less systems simplistic and low cost. Only limitation is ones imagination. Instant access, links to other documents, program briefs and status, and immediate point of contact for e-mail a mouse click away. Files can be uploaded and downloaded to a file transfer protocol inbox (FTP). The site is password protected and can have subdirectories for different users, projects, and files. It is as simple as using a file manager in Windows.

CDRL Management

NAVSEA 703/602–8515 – phone
Neily, CAPT (Sel) Dave 703/418–1163 – fax
LCAC Acquisition Management NEILY_DAVE_CDR@HQ.NAVSEA.NAVY.MIL
PMS377J
2531 Jefferson Davis Highway
Arlington, VA 22242

What program are you with?
Landing Craft Air Cushion (LCAC)

What is the name of your new idea, approach, process innovation, or lesson learned?
Electronic CDRL Program for the LCAC SLEP Contract Modification

Give a description of this idea and how it fits in the program:
The purpose of the electronic CDRL program is to provide a vehicle for faster and more cost-efficient submission and distribution of the CDRL data requirements listed in the LCAC SLEP Contract Modification.

How is it innovative and creative?

Prior to the electronic CDRL program all the CDRLs were manually forwarded to each individual user either by the USPS mail system or overnight delivery system. The CDRLs were then copied and further distribution was made. This was not a cost effective or simple process. The Electronic CDRL Program eliminates the need for producing, copying, manually distributing and re-copying the CDRL. The contractor merely forwards one e-mail containing a CDRL (or CDRLs) to a central data collection point, where it placed on a secure intranet WEB site for review by the appropriate users.

How has this new improvement been applied?

The Electronic CDRL Program will apply to all of the 90+ CDRLs that will be submitted under the existing LCAC SLEP Contract Modification. Future plans call for the Electronic CDRL Program to be expanded to include data submissions for other contracts.

What were the results and lessons learned in developing this improvement?

A computer based system, such as the Electronic CDRL Program, requires a closely coordinated approach in the initial development stage to insure that the different site with different equipment and requirements are considered to eliminate future ADP problems. Because the Electronic CDRL Program utilizes computers instead of manually producing the CDRLs, there exists a substantial information security requirement.

What other information would help another program evaluate its applicability towards their program?

If the program is involved in the contracting process in which there are a large number of CDRL requirements, it would behoove the program to perform a simple cost analysis to determine the most cost effective and faster means of submitting and distributing the CDRLs. The results of the cost analysis will, most likely, be to develop an electronic CDRL program.

CHANGE PROPOSALS

Change Proposals

NAVSEA 703/602–3097 – phone
Hess, H. Lee 703/602–6683 – fax
Coast Guard Polar Icebreaker Hess_Lee@hq.navsea.navy.mil
NAVSEA PMS373
Commander
Naval Sea Systems Command (PMS373)
Arlington, VA 22242

What program are you with?
Coast Guard Polar Icebreaker (WAGB 20)

What is the name of your new idea, approach, process innovation, or lesson learned?
Deviation Banking

Give a description of this idea and how it fits in the program:
Means of authorizing the Contractor, in a timely way, to incorporate formally submitted changes in the form of deviations and waivers that have been reviewed and considered technically acceptable to the Government. The process is expedited by initially using rough order of magnitude cost estimates (either increase or decrease) and combining several deviations/waivers into a bank which is definitized later. Each bank is not-to-exceed a conglomerate cost of $250K. The definitizing takes place at the 50% of not-to-exceed cost or six months after the bank is formed (whichever comes first).

How is it innovative and creative?
It reduces the time needed to implement the waiver/deviation and thereby reduces cost of the change.

How has this new improvement been applied?
We are working on our third Deviation Bank. The first bank incorporated three deviations, the second 58 deviations, and the third is still open.

What were the results and lessons learned in developing this improvement?

- Successful and timely processing and difinitization of waivers in accordance with agreed procedures.
- Both Government and Contractor are satisfied with the procedure and outcome.

What other information would help another program evaluate its applicability towards their program?
This is a single ship program. This process would need to be evaluated if adapted for a multiship application.

Change Proposals

NAVSEA 703/604–5330x150 – phone
Slauson, Chuck 703/604–6008 – fax
Navy Signal Processors Program Office Slauson_Chuck@hq.navsea.navy.mil
PMS428
2531 Jefferson Davis Highway
Arlington, VA 22242–5169

What program are you with?
PEO(USW) PMS428 Navy Signal Processors Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Change Control Process using the IPT approach as opposed to the MIL–STD 480 process

Give a description of this idea and how it fits in the program:
The major feature of this approach is the establishment of IPTs consisting of contractor and government personnel. These highly visible teams evaluate, investigate, classify, document, and propose solutions to Modification Requests (MRs). Early formation and use of on-line communications by the IPT is responsible for reducing the review process cycle time. The development of a comprehensive MR template that ensures consideration by all applicable disciplines and the extensive use of electronic media via e-mail and on-line access to the MR database permits the IPT to process Class I MRs (similar to Class I ECPs) from acceptance to presentation to the Change Control Board (CCB) in a paperless environment using on-line electronic media in less than one week.

How is it innovative and creative?
The cycle time for class I changes has been reduced to less than one week when required. The extensive use of electronic media allows this process to operate in real time, from creation to end, with minimal paperwork generation. The empowerment of the IPTs to the lowest levels of both organizations has helped eliminate the historical adversarial relationships between the Government and contractor. By removing management involvement from the IPTs the working groups have been extremely productive because the political element has been removed from the process and reserved for approval authority only.

How has this new improvement been applied?
It has been incorporated into both the PMS428 and Lucent Technologies Configuration Management Plans. It is the vehicle by which Lucent controls the AN/UYS–2A baseline.

What were the results and lessons learned in developing this improvement?
By empowering the IPTs to be accountable for developing the best possible technical solution in a timely manner, and making the Navy IPT members part of this process on the front end, the end result has been positive teambuilding between the Navy and the prime contractor.

What other information would help another program evaluate its applicability towards their program?
Other programs should evaluate how they control the product baseline and the turnaround experienced from the identification of a problem, the documentation thereof, and the average time it takes to bring those issues to closure. This should be done for both minor and major changes. Programs experiencing long cycle times and excessive documentation in implementing changes would be candidates for this "improved" change control process.

COLOCATION WITH INDUSTRY

Colocation with Industry

NAVSEA 703/418–6074 – phone
Gauthier, Capt. Maurice 703/418–2527 – fax
LPD 17 Amphibious Transport Dock Ship Program gauthier_maurice@hq.navsea.navy.mil
PMS 317
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?
LPD 17 Amphibious Transport Dock Ship Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Co-Location of Program Management Oversight Team

Give a description of this idea and how it fits in the program:
TEAM 17 has reengineered the Program Management oversight process by co-locating the traditional headquarters oversight functions with FSC and SUPSHIPS. The desired result is real concurrent engineering with concomittant reductions in both cycle time and oversight costs.

How is it innovative and creative?

How has this new improvement been applied?

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Colocation with Industry

NAVAIR 703/604–2424x4708 – phone
Hill, CDR Bob 703/604–2743 – fax
Production Sonobuoys HILLR@NIMITZ.NAVAIR.NAVY.MIL
PMA–264B
1421 Jefferson Davis Hwy.
JP#1, Room 742

What program are you with?
Production Sonobuoys
What is the name of your new idea, approach, process innovation, or lesson learned?
Collocation of Production Sonobuoy Team in one location, NSWC, Crane.
Give a description of this idea and how it fits in the program:
BRAC closedown of Indy forced us to move contracts and production engineers. We collocated them with our logistics and testing community at NSWC, Crane.

How is it innovative and creative?
Moved NAVAIR jobs to NAVSEA. This was the right thing to do. It put the Team together. Crane had to stay due to labs and Glendora Lake.

How has this new improvement been applied?
Collocation of:

- contracts
- engineering
- logistics
- T&E

What were the results and lessons learned in developing this improvement?
Team is more cohesive. No more "it's their fault" attitude.

What other information would help another program evaluate its applicability towards their program?
Get desks, computers, etc. setup early.

Colocation with Industry

MARCOR 703/492–3300 – phone
Zeitfuss, Walt 703/492–3438 – fax
Advanced Amphibious Assault Vehicle wzeitfus@notes.hqi.usmc.mil
991 Annapolis Way
Woodbridge, VA

What program are you with?
Advanced Amphibious Assault Vehicle Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Co-location of the Program Office with prime contractor where prototype system integration and assembly will occur.

Give a description of this idea and how it fits in the program:
The AAAV program office, prime contractor, and principle subcontractor representatives have co-located in the facility where AAAV prototype integration and assembly will occur. This co-location requirement was incorporated into the contract to fully benefit from the implementation of Integrated Product and Process Development (IPPD) and the use of Integrated Product Teams (IPT).

How is it innovative and creative?
We believe we are the first ACAT 1D program to fully integrate contractor and program office efforts at this early phase of the acquisition.

How has this new improvement been applied?
DRPM–AAA, General Dynamics Amphibious Systems (GDAMS), and several subcontractors are co-located at our Woodbridge, VA facility. GDAMS is executing their contract using an IPPD approach with Government personnel fully integrated into all IPTs. Integrated efforts for design synthesis, decision making, and risk reduction have to occur in "real-time" to meet programmatic requirements. The commitment to achieving a successful AAAV development means fully supporting (in words and action) the IPT approach in an environment conducive to design and onsite integration and assembly.

What were the results and lessons learned in developing this improvement?

RESULTS:

So far, these efforts have resulted in a rapid transition from implementing a "proposed" design to planning an effective design and build "process" with a goal of "Total Design Success".

Major contract events, such as the Integrated Baseline Review and System Requirements Review, occurred with no surprises because of prior planning and a common understanding of expected outcomes.

Risk identification and mitigation efforts occur on a continuous basis

There is a shared understanding of each organization's unique needs which are reinforced by daily contact.

LESSONS LEARNED

There is great value earned in fully supporting the contractor's IPT effort.

IPTs and co-location mean that everyone knows what/when/how on a daily basis – this can be a two-edged sword.

Early IPT training is invaluable in effecting a change in how business is done.

It is vital to fully articulate, and have a complete understanding by everyone, on the roles and responsibilities of the government representatives on IPTs.

The demand on program office personnel to fully support the IPT effort is significant and could only be exacerbated by co-location.

The start-up time to get a "facility" up and running is easily underestimated.

What other information would help another program evaluate its applicability towards their program?

Investments costs (in terms of both start up and recurring) and time need to be assessed in terms of potential time saved, efficiencies realized (one-time reviews, etc.), reductions in travel budgets, etc.

The offeror's co-location planning must be evaluated as a source selection factor to ensure it is comprehensive and realistic.

Effective electronic communication tools are critical, and must be in place early. This may require a significant upgrade on behalf of the PMO.

Corporate buy-in on the value of IPPD/IPT and co-location must be established early.

COMMERCIAL BASED PERFORMANCE SPECIFICATION

Commercial Based Performance Specification

NAVSEA (703) 602–8409 x202 – phone
Coughlin, Jean-Michel (703) 602–5606 – fax
Barracks Craft [APL], Series 61 & 62 (Large) and Series 63 – 65 (Small)
PMS 325G COUGHLIN_JEAN_MICHEL@HQ.NAVSEA.NAVY.MIL
NAVSEA
NC3
2531 Jefferson Davis Hwy
Arlington, VA 22202

What program are you with?
Program Executive Office for Carriers, Littoral Warfare & Auxiliary Ships (PEO CLA) and Surface Ship Directorate (SEA 91)
Support Ships, Boats & Craft Program Management Office (PMS 325)

What is the name of your new idea, approach, process innovation, or lesson learned?
"Commercial Based Performance Specification".
This idea advocates switching from a purely Performance Based Specification to a Commercial Based Performance Specification. Lessons Learned from the APL(L) procurement program.

Give a description of this idea and how it fits in the program:
The use of a Performance Specification, as per NAVSEA's definition, for the procurement of an end item even as non-complex as the APL craft needs to be revisited. At the core of the issue is the perception that been specific in defining one's requirement equates telling the contractor how to do its work; that is not so. In the shipbuilding industry as in most of the commercial world, commercial specifications allow for "Customer preferences" and "Specificity" when needed to define a requirement in no uncertain terms.

How is it innovative and creative?
The concept of using a Performance Specification instead of a detailed Specification is good, but using NAVSEA's rigid definition of what a Performance Specification ought to be, is going too far and against best commercial practices. Let's use Performance Specifications but with a commercial flavor. You can be very specific in your requirement, and yet not tell the contractor how to do its business at the same time. When interacting with the contractor , we make sure that any decisions made are mutually beneficial; that the consequences will result in a "Win-Win" situation for all parties concerned.

The shipbuilder, its subs, SUPSHIP, the Fleet (the user), and the program Office all participate in Program Reviews. Decisions are made in "Real Time" at those reviews, and contractual agreements are ratified on the "Spot" and are binding. Authority is delegated at the working level. All parties are accountable for the decisions made. Everybody knows what they have to do to make things happen.
It is no longer the old "US vs THEM" type of contracting administration approach.

How has this new improvement been applied?
The Performance Specification for the procurement of three (3) APL(Small) will be a Commercial Based Performance Specification.

What were the results and lessons learned in developing this improvement?
A Performance Specification IAW NAVSEA's Definition was used for the procurement of two APL(L). Although the Performance Specification provided latitude to the potential bidders, the

lack of specificity resulted in; numerous bidders' questions asking for clarification of the requirement, bidders misinterpretation of the required capabilities, and increased difficulty in the proposals evaluation.

The use of such type of Performance Specification, may also result in having to make many change to the proposed design during construction as it did for the APL(L) production contract. It was impossible for the Shipbuilder to "read" the customer's specific requirements when so many options are possible with that type of Performance Specification.

What other information would help another program evaluate its applicability towards their program?

Check comparable commercial specifications (if Available) and other commercial practices that may be used on your program.

COMMERCIAL CONTRACT ADMINISTRATION

Commercial Contract Administration

NAVSEA (703) 602–8409 x202 – phone
Coughlin, Jean-Michel (703) 602–5606 – fax
Barracks Craft [APL], Series 61 & 62 (Large) and Series 63 – 65 (Small)
PMS 325G COUGHLIN_JEAN_MICHEL@HQ.NAVSEA.NAVY.MIL
NAVSEA
NC3
2531 Jefferson Davis Hwy
Arlington, VA 22202

What program are you with?
Program Executive Office for Carriers, Littoral Warfare & Auxiliary Ships (PEO CLA) and Surface Ship Directorate (SEA 91)
Support Ships, Boats & Craft Program Management Office (PMS 325)

What is the name of your new idea, approach, process innovation, or lesson learned?
"Commercial Contract Administration".
This idea switches from the old practices of contract administration to a more commercial like type where it is customary to have customer participation in a teaming relationship during all phases of construction. Lessons Learned from the APL(L) procurement program.

Give a description of this idea and how it fits in the program:
This new partnership between the contractor and the Government focuses early on in developing a product which will serve the needs of the customer. This new arrangement let's the contractor use his own "in-house" quality assurance program and data reporting format. Periodic reviews are upon contractor's invitation only. Government inspections are limited to verifying that items tendered for acceptance conform to contractual requirements only. There are no Unilateral changes; all changes by mutual agreement only.

How is it innovative and creative?
When interacting with the contractor , we make sure that any decisions made are mutually beneficial; that the consequences will result in a "Win-Win" situation for all parties concerned.

The shipbuilder, its subs, SUPSHIP, the Fleet (the user), and the program Office all participate in Program Reviews. Decisions are made in "Real Time" at those reviews, and contractual agreements are ratified on the "Spot" and are binding. Authority is delegated at the working level. All parties are accountable for the decisions made. Everybody knows what they have to do to make things happen.
It is no longer the old "US vs THEM" type of contracting administration approach.

How has this new improvement been applied?
Since Post Award Conference, and all throughout the APL(L) production contract.
What were the results and lessons learned in developing this improvement?
This improvement in contract administration has resulted in less bureaucratic red tape, fewer delays, and disruptions to the construction process, thus minimizing future potential cost increases to the overall production contract.

What other information would help another program evaluate its applicability towards their program?
Avoid at all cost to tell the contractor how to do its work. Most likely than not, they know how to do it better than you do; but make suggestions and/or recommendations if necessary. Depart from the

old "Big Brother" philosophy of always looking over the contractor’s shoulders; it is not the best way to build a foundation of trust and mutual respect.

COMMERCIAL SUPPORT

Commercial Support

NAVAIR 703/604–2440x5203 – phone
Ahern, CDR Mike 703/604–2784 – fax
V–22 OSPREY AHERNMG@AM@NTRPRS
PMA–275B
JP#2, Room 322

What program are you with?
V–22

What is the name of your new idea, approach, process innovation, or lesson learned?
Commercial procurement and support of V–22 engines

Give a description of this idea and how it fits in the program:
Engine procurement and support will be on the same basis as a commercial carrier, rather than the standard military procurement/support

How is it innovative and creative?

- Eliminates organic infrastructure
- Potential to save manpower
- Potential to avoid O&S costs (Power by the Hour (TM))
- Avoids having to fund engine improvements.

How has this new improvement been applied?
Has not been negotiated. Planned for 2Q97 award

What were the results and lessons learned in developing this improvement?
Broad support. Primary lesson learned is how many people/organizations need to be in on the planning.

What other information would help another program evaluate its applicability towards their program?
PMA–275 can provide briefing on lessons learned and questions to ask.

COMMUNICATIONS WITH INDUSTRY

Communications with Industry

NAVAIR 703/604–2860x8771 – phone
Hogan, Christine 703/604–2405 – fax
AN/ALR–67(V)3 hogancm@ntrprs.navair.navy.mil
PMA272B1
PEO(T)/PMA272
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: AN/ALR–67(V)3 Radar Warning Receiver

What is the name of your new idea, approach, process innovation, or lesson learned?
Prime contractor involvement in Navy decision meetings.

Give a description of this idea and how it fits in the program:
The prime contractor is invited to Navy decision meetings. The contractor is part of all aspects of the program. Competition and/or procurement sensitive information is discussed without the contractor's presence based on the recommendations of counsel and contracts.

How is it innovative and creative?
In the past, Navy decision meetings have been off limits to contractors.

How has this new improvement been applied?
Hughes Aircraft Company was represented at a Navy Program Review (NPR) with PEO(T). The NPR was convened to approve a rebaseline of the program due to an 18 month schedule slip.

What were the results and lessons learned in developing this improvement?
The contractor gained valuable insight into the concerns of Navy leadership. The program was able to move forward with a common goal. Careful review of the acquisition strategy and budgeting presentations must take place prior to the meeting by counsel and contracts.

What other information would help another program evaluate its applicability towards their program?
This should become standard operating procedure for decision meetings on programs without constraints related to relaying information to contractors (for example, sole source approval or winner of a competition that would not use the information to win a follow-on competition).

Communications with Industry

NAVSEA 703/604–5330x143 – phone
Guthrie, Clair 703/604–6008 – fax
Navy Signal Processors Program Office Guthrie_Clair@hq.navsea.navy.mil
PMS428
2531 Jefferson Davis Highway
Arlington, VA 22242–5169

What program are you with?
PEO(USW) PMS428 Navy Signal Processors Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Design, development, and test process initiatives.

Give a description of this idea and how it fits in the program:
Traditional development methodologies where joint contractor/Navy design reviews are performed at major development phases (i.e., SRR, PDR, CDR, ATRR) have not been totally successful. On the reverse side, contractor/Navy co-location efforts don't seem to allow the contractor freedom to determine "how" to perform to requirements and may reduce the autonomy needed by the Navy. PMS428/Lucent Technologies are initiating a process where both the Navy and the contractor (via IPTs) have agreed to a process that allows incremental design/data reviews to happen within the development phases. For example: specific baselined documentation is required for entry into the High Level Design Phase and specific documentation and software is required to exit the High Level Design Phase. Within the High Level Design Phase, sub-elements are broken down with entry and exit criteria identified and agreed to for each. Both the overall process and the sub-element criteria are agreed to up-front by both the contractor and Navy representatives via an IPT. This process allows both Lucent and the Navy to understand the process and to modify the product, thereby significantly reducing risk and saving considerable time and resources.

How is it innovative and creative?
This approach allows the contractor to maintain "the how", but still allows the Navy to understand the process and provide positive impact early during design.

How has this new improvement been applied?
The AN/UYS–2A COTS Variant (ACV) is attempting to port application software from Full Mil proprietary closed systems, to COTS-based Open Systems Architecture with 100% reuse of existing legacy AN/UYS–2A software. This effort requires the design, development, and implementation of a software "middleware" that isolates real-time applications from hardware dependent architectures. This "middleware" approach needs to be designed, developed, and implemented in such a manner as to allow "real-time" applications to run on multiple hardware architectures (i.e. workstations, DSP, and SMP).

What were the results and lessons learned in developing this improvement?
Implementation is just starting.

What other information would help another program evaluate its applicability towards their program?
The process is still evolving, so it's too early to tell.

Communications with Industry

NAVAIR 703/604–2424x4708 – phone
Hill, CDR Bob 703/604–2743 – fax
Production Sonobuoys HILLR@NIMITZ.NAVAIR.NAVY.MIL
PMA–264B
1421 Jefferson Davis Hwy.
JP#1, Room 742

What program are you with?
Production Sonobuoys

What is the name of your new idea, approach, process innovation, or lesson learned?
SERC – Sonobuoy Engineering Review Committee

Give a description of this idea and how it fits in the program:

The SERC is an engineering review of all sonobuoys. The SERC reviews sonobuoy specifications, proposed changes, ECP's, Environmental Requirements, etc. Membership includes both government and manufacturers.

How is it innovative and creative?
Teaming with private industry to solve engineering, spec, production issues.

How has this new improvement been applied?
Quarterly SERC meetings.

What were the results and lessons learned in developing this improvement?
Ensured the government spec is producible. Sonobuoy's have used performance based specs for 40 years, this helps us ensure what we want can be made.

What other information would help another program evaluate its applicability towards their program?

- Creates excellent teaming with private industry.
- Keeps government and industry engineers talking.
- Improves the process. Reduces questions, etc. on RFP's. The manufacturer already know what we want.

Communications with Industry

NAVSEA 703/418–2555 – phone
Manvel, Captain J. Talbot 703/418–1522 – fax
CVX Program MANVEL_TAL_CAPT@HQ.NAVSEA.NAVY.MIL
PMS378
CVX Design Site
2361 Jefferson Davis Highway
Heitman Suite PL 412
Arlington, VA 22202

What program are you with?
PMS378 CVX Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Partnership in Affordable Ship Design Development

Give a description of this idea and how it fits in the program:
This process achieves industry involvement into the early stages of ship design development to establish common vision for design priorities including cost, manning, warfighting, maintenance, and logistic objectives.

How is it innovative and creative?
Industry involvement in ship design has typically occurred later in the design process. Non-reimbursed contractor input into the early design and feasibility studies were solicited from a large number of industry representatives shortly after milestone 0.

How has this new improvement been applied?
To facilitate technological investment planning for the CVX design process by solicitation of industry ideas on technical feasibility.

What were the results and lessons learned in developing this improvement?
Participation was broad and idea was well received. It is too early in the CVX design process to measure the success.

What other information would help another program evaluate its applicability towards their program?
Documentation is available at CVX program office (Heitman Bldg. Suite PL412).

Communications with Industry

NAVSEA 703/602–1888x235 – phone
Yonce, John 703/602–1608 – fax
SEAWOLF Program PMS–350 Yonce_John@HQ.NAVSEA.NAVY.MIL
350A5

What program are you with?
SEAWOLF

What is the name of your new idea, approach, process innovation, or lesson learned?
Design GFI Tagging

Give a description of this idea and how it fits in the program:
Design GFI Tagging is based on our SEAWOLF experience and is applicable to situations where significant Government oversight of contractor performance is required. Specifically, our concern involved design and construction of spaces and systems where Government Furnished Information (GFI) substantially impacted ship design at the interface and Government Furnished Equipment (GFE) impacted construction detail of spaces and equipment and system installation.

Our objective was to insure that GFI met design yard needs for developing accurate and complete configuration and construction drawings, procedures and specifications on schedule. And further, to insure that the design yard had correctly interpreted the GFI and accurately reflected the design on construction documentation.

The problem was twofold:

1. The construction documentation was organized by ship section and not keyed in any way to identify GFE hull and system interfaces. There was no easy way to evaluate design status in our areas of oversight responsibility.

2. Construction documentation was never available for our review until after it had been issued to the construction yard. It became difficult and, on occasion impossible, to review this material before construction events and activity had already taken place. The risk here is costly rip out and rework if mistakes had been made.

How is it innovative and creative?
Design GFI Tagging is a new tool for the Government Manager to better do his work, the Design Agent with his resources and computerized data bases can provide, at a small cost, information that will make the government review for interfaces and compatibility much easier, saving valuable manhours.

How has this new improvement been applied?
Design GFI Tagging has not been applied in SEAWOLF as the design was mature when the problem was fully recognized.

What were the results and lessons learned in developing this improvement?
The lesson learned in SEAWOLF review of GFI and related design data is to propose Design GFI Tagging in the future.

What other information would help another program evaluate its applicability towards their program?
Design GFI Tagging is recommended to be implemented as follows:

The recommendation involves design yard contracts:

1. Require design agents to tag all construction documentation associated with a particular GFE system so that individual GFE related drawing schedules can be developed and maintained.

2. Allow government access and review (not necessarily approval) of all GFE related drawings prior to final issue to the construction yard. This would provide an opportunity for a working group or Integrated Product Team to audit selected drawings to insure that interface requirements were accurately reflected.

Communications with Industry

NAVSEA 703/604–6052x544 – phone
Beard, Jeffrey 703/602–6054 – fax
The Long-term Mine Reconnaissance System (LMRS) Beard_Jeffrey@hq.navsea.navy.mil
PMS403
2011 Crystal Drive
CPk 1, Room 817
Arlington, VA 22242–5169

What program are you with?
The Long-term Mine Reconnaissance System (LMRS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Contract Management by using the Contractor's electronic database vise Contract Data Requirements List.

Give a description of this idea and how it fits in the program:
The idea requires the contractor to provide the Government real time access to the contractor's internal electronic database. The intent is to gain access to the same database the contractor uses for its day to day management and execution of the contract. This idea provides the Government increased insight into the contractors progress, reduces document generation and reporting costs, and is less intrusive on the contractor.

How is it innovative and creative?
This process reduces or eliminates the need for Contract Data Requirements Lists (CDRLs), and provides increased visibility in to the contractor's performance. Additionally, each LMRS contractor has indicated that developing this process will make them more competitive in future non-LMRS competitions.

How has this new improvement been applied?
This improvement has been applied as a tool for the management and evaluation of all contractor development efforts for the program. This approach allows the Government insight in to both the management performance and the technical design of the contractor. The databases provide the Government more timely and increased knowledge of the contractors' efforts thus allowing the Government to identify and correct potential problems before the problems impact the program.

What were the results and lessons learned in developing this improvement?

The results are increasing positive. There were development problems for both the contractors and the Government. As the process develops, the access to the information, and the information available on the databases are increasing useful in the management of the program.

Lessons learned in developing the databases are as follows:

1) The initial start up costs and time can be significant. To foster competition, we allowed each contractor to define the software and hardware requirements for their database. While this approach improved the competitive process, it also, required PMS403 and all support activities to procure special hardware and software to interface with the contractor's database. If the database is not part a competitive process, the Government costs could be reduced by specifying in the contract what hardware and software the contractor should use to develop the database. The problem with this approach is this forces the contractor to procure the required equipment and modify its internal database to support the new requirements. This will increase the contractor's cost and reduce the contractor's efficient until the contractor becomes familiar with the new hardware and software.

2) There is a lead time in developing a useful database. The LMRS was the first contract that some of the contractor managed using an electronic database. Developing a useful tool for both the contractor and the Government required time and additional effort by both the contractor and the Government. Once developed the contractors indicated that the databases were useful in managing the program, and would be used on future non LMRS contracts.

3) Define your reporting requirements in the contract. Our contract only requested routine data dumps to provided insight in to the contractor's daily management and technical efforts. The data reporting requirements were intentionally left vague to support our competitive process. Based on these vague reporting requirements, we have received varying levels of information from full day to day program efforts, to only routine updates providing minimal information on the contractor's progress. As with CDRLs, the contractor is only required to report the information your request in the contract. Your reporting requirements should reflex the level of information you wish to receive from the contractor.

4) This process requires you to develop a good working relationship with the contractor. The database allows the Government greater access to the contractor's in process work. This additional insight requires a good faith partnership between the Government and the contractor to ensure the information on the database is reviewed fairly based on the level of maturity of the document.

What other information would help another program evaluate its applicability towards their program?

Review the data requirements for your contract. If minimal insight and few reports are required, other delivery methods may be more cost effective.

Consider the number of sites that require access to the database. If your program requires access to the database from several different geographically locations, than an electronic database may be cost prohibitive. Establishing an effective database would require each location to procure at least one full set of software and hardware. Incurring these start up costs for several locations may become prohibitive.

Consider your commitment to the process. Developing a useful database with a contractor requires a true commitment to working with the contractor as partner in the development process, vice the traditional adversarial role.

Communications with Industry

ABM 703/602–2123 DSN: 332–2123 – phone
Morris, Captain Lou 703/602–3129 – fax

Government-Industry Data Exchange Program morris.louis@hq.navy.mil
2211 South Clark Place
Arlington, VA 22244–5104

What program are you with?

GIDEP (Government-Industry Data Exchange Program) is a cooperative activity between government and industry participants seeking to reduce or eliminate expenditures of resources by making maximum use of existing information. The program provides a media to exchange technical information essential during research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.

Participants in GIDEP are provided electronic access to the six major types of data listed below. The proper utilization of GIDEP data can materially improve the quality and reliability while reducing costs in the development and manufacture of complex systems and equipment.

What is the name of your new idea, approach, process innovation, or lesson learned?

GIDEP-World Wide Web

Besides the fact that GIDEP is a unique forum that is well utilized by both Government and Industry exchanging technical information that had substantial Cost Avoidance to both parties in the past thirty years to present day, the method of exchange has been enhanced to significantly reduce costs for the GIDEP program and the program participants (over 1500 companies and government activities).

The new improved process for disseminating GIDEP information was done by utilizing the Internet-World Wide Web technology to allow GIDEP participants to Search the database.

Give a description of this idea and how it fits in the program:

GIDEP-World Wide Web is a n incredible break-through that helps participants of the program utilize the World Wide Web. Now "Web Surfers" browsing for technical information can find information about GIDEP and hence they may apply to join the GIDEP program. Current GIDEP members can find news on GIDEP by using the GIDEP Home Page (http://www.gidep.corona.navy.mil). But most important is the new GIDEP database access through the world wide web.

How is it innovative and creative?

GIDEP-World Wide Web is an innovative idea because it uses current technology to improve an invaluable tool in today's workplace.

How has this new improvement been applied?

GIDEP-World Wide Web is now used by GIDEP member to access the database. Prior to this improvement the GIDEP program was required to develop and disseminate software via US-Mail to all its members (1500). Every time an upgrade to the software was made, a new set of disks were mailed out to all the members. In using this technology, there is no mailing of costly diskettes made, no waiting time or lost mail to slow up the process. We simply make the change on our server and the members can access the system using their own web browsers (i.e., Netscape or MS-Internet Explorer).

What were the results and lessons learned in developing this improvement?

In developing GIDEP-World Wide Web we found the result to be a win-win situation for both the GIDEP program and its members. Some of the benefits and results are as follows:

Benefits to GIDEP:

* No Cost to disseminate Software
* Advertising Mechanism
* Real-time improvement to software

Benefits to GIDEP Members:

* No software to install
* Easy to use Browser
* Real-time access without software reinstallation

Benefits to Non-GIDEP Members:

* Opportunity to apply to join GIDEP

What other information would help another program evaluate its applicability towards their program?

Other programs should visit the GIDEP-World Wide Web site at http://www.gidep.corona.navy.mil to prove to themselves the ease of use and applicability of usage towards their own program.

COMPUTER BASED TRAINING

Computer Based Training

NAVSEA 703/602–8134x101 – phone
Woodson, CDR Steve 703/418–1163 – fax
AN/KSQ–1 and PLRS woodson_steve@hq.navsea.navy.mil
PMS377
Program Executive Office PMS377W
Carriers, Littoral Warfare and Auxiliary Ships
2531 Jefferson Davis Highway
Arlington, VA 22242–5171

What program are you with?
PMS377: Amphibious Assault Direction System (AN/KSQ–1) and Navy Position Location Reporting System (PLRS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Computer Based Training

Give a description of this idea and how it fits in the program:
Rather than standing up traditional schoolhouse training for AN/KSQ–1 operators, we developed and implemented an imbedded, interactive trainer which can be run aboard ship at the boat handling workstation, or elsewhere on various hardware and operating systems.

How is it innovative and creative?
The computer based trainer (CBT) was developed at a fraction of the initial cost for schoolhouse training and can be run aboard ship. This eliminates the majority of training facility and per diem costs, and permits the operators to train and refresh underway and on a schedule they control. Distribution of revised courseware is simply a software update, and life cycle costs are greatly diminished.

How has this new improvement been applied?
The CBT is being fielded for every AN/KSQ–1 installation on amphibious ships and replaces traditional, shoreside schoolhouses.

What were the results and lessons learned in developing this improvement?
The CBT has been enthusiastically received by the fleet and has saved hundreds of thousands of dollars. It also allows the training to reach more sailors, and to reach them “just in time”, which better satisfies our fleet customers.

What other information would help another program evaluate its applicability towards their program?
None.

COMPUTER SYSTEMS

Computer Systems

SPAWAR 703/602–2747 – phone
Bachmann, USN, Captain Michael C. 703/602–5207 – fax
Naval Tactical Command Support System (NTCSS) bachmanm@smtp–gw.spawar.navy.mil
PMW 151
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
Naval Tactical Command Support System (NTCSS).
Space & Naval Warfare Systems Command (PMW 151).

What is the name of your new idea, approach, process innovation, or lesson learned?
SNAP in a Box:

Process Innovation: Hardware Solution for accommodating the Standard Non-Tactical Automated Data Processing (SNAP) System Year 2000 problem. SNAP II hardware platforms (Harris Computers) have irresolvable Year 2K issues as the hardware platforms are no longer supported by industry.

Give a description of this idea and how it fits in the program:
Recognizing that additional funds would not be forthcoming, the Program Office convened an IPT for the purpose of addressing this urgent requirement for resolving the Year 2000 problem associated with the SNAP II Harris Computers. SPAWAR's NTCSS Program Office (PMW 151), in conjunction with their software development activity, the Navy Management Systems Support Office (NAVMASSO), and their In-Service Engineering Agent (ISEA), NISE East Portsmouth, developed an alternative course of action for resolving the SNAP II Harris Year 2000 problem. Although 82 shipboard LANs would have to be deferred for 2 years in order to fund this interim solution, it nevertheless resolved an immediate impact to the fleet.

How is it innovative and creative?
Utilizing existing NTCSS COTS hardware the IPT successfully designed, and tested, a rack configuration that would enable replacement of the Harris Computers and their associated Year 2K deficiencies. This IPT was able to capitalize on existing NTCSS hardware platforms while rehosting the existing SNAP II applications.

How has this new improvement been applied?
Both CINCLANTFLT and CINCPACFLT activities have been supportive of this initiative. The "SNAP in a Box" configuration has been tested in the lab, demonstrated to Fleet Personnel, and is ready for deployment.
What were the results and lessons learned in developing this improvement?
Year 2000 deficiencies related to the SNAP II Harris Computers can be offset through deployment of a "SNAP in a Box" hardware configuration. This solution was afforded through the use of Program IPTs.

SNAP in a Box turnkey costs ($84,200) versus SNAP II Annual Maintenance Costs ($65,000) further illustrated that this solution essentially pays for itself in 16 months.

What other information would help another program evaluate its applicability towards their program?
Year 2000 issues exist in both software and hardware environments. Resolution of these issues must be addressed at the earliest opportunity. Other Program Offices are encouraged to contact PMW

151, in order to evaluate the strategy that has been established for addressing resolution of existing Year 2000 issues.

CONFIGURATION MANAGEMENT

Configuration Management

NAVAIR 703/604–0916x5304 – phone
Salvador, Mark 703/604–0808 – fax
Harpoon/SLAM/SLAM–ER Mark_Salvador@LAN–EMAIL.PEOCU.NAVY.MIL
PMA–258
1213 Jefferson Davis Hwy., Room 703
Arlington, VA 22246

What program are you with?
PMA–258 Stand-Off Weapon Systems

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson Learned: Understanding Configuration Management and Supportability are Key to Successfully Implementing Acquisition Reform.

Give a description of this idea and how it fits in the program:
The Harpoon/SLAM–SLAM–ER Program has successfully implemented several acquisition reform initiatives. This has included giving maintenance of the production data package (PDP) and configuration management (CM) control to the prime contractor. Also, the contractor has been encouraged to eliminate unnecessary material and process requirements to lower the cost of the weapon system while maintaining its overall performance requirements.

During this process, there has been significant changes to the production data package and subsequent logistics impact. Understanding configuration management of the system and the process by which the contractor and its sub-contractors maintains CM control is integral to maintaining the long term supportability and integrity of the system.

How is it innovative and creative?
Previously, the U.S. Navy maintained a DOD–STD–100 Level 3 Production Data Package. Transfer of this data package and configuration management control to the contractor has forced a tremendous change in the way the USN does business. Overall responsibility for Integrated Logistic Support and Maintenance is now approached through an Integrated Product Team. Changes which were previously not cost effective to implement, due to logistics impact, are now reviewed and implemented easily and cost effectively.

How has this new improvement been applied?
The Harpoon/SLAM/SLAM–ER program has re-evaluated its maintenance philosophy. It has eliminated I–Level maintenance for SLAM and SLAM–ER. The program continues to evaluate eliminating I–Level maintenance for Harpoon. The prime contractor has been given the responsibility for long term support and maintenance of the weapon system and the authority required to reduce production cost. The SLAM–ER weapon system has transferred the bulk of ILS support to the prime contractor.

What were the results and lessons learned in developing this improvement?
The production cost for the weapon system has decreased as well as ILS implementation costs. The USN has less oversight of contractor activities and the prime contractor now has the responsibility of long term support and maintenance of the weapon system. The SLAM–ER weapon system is very close to becoming a "Wooden Round".

What other information would help another program evaluate its applicability towards their program?
N/A

Configuration Management

NAVSEA 703/602–2715x167 – phone
Deligne, William J. 703/602–5998 – fax
Aircraft Carrier Program Deligne_Bill@HQ.NAVSEA.NAVY.MIL
PMS 312AB
Naval Sea Systems Command
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5160

What program are you with?
Aircraft Carrier Program, PEO CLA (PMS 312)

What is the name of your new idea, approach, process innovation, or lesson learned?
Acquisition Strategy for CV/CVN Battle Group Commanders Complex

Give a description of this idea and how it fits in the program:
An Aircraft Carrier is the command ship for the battle group on which the battle group commander resides. In order to provide the battle group commander with the latest command and control system supported with the latest technology, construction of these facilities aboard the CVN 75 has been delayed until the Post Shakedown Availability (PSA). Deferring construction of these facilities to PSA has allowed definition of the systems that support the battle group commander to be delayed by 2 years. Our goal is to move construction of these highly evolving shipboard systems and facilities as close to the ship's first deployment as the SCN funding process will currently allow.

How is it innovative and creative?
Previous CVNs have been delivered with battle group command facilities only to see major upgrades take place prior to deployment. Although a much greater teaming effort must take place between NAVSEA, the Type Commanders, Battle Group Commander Staffs, SPAWAR, and Newport News Shipbuilding, this process will allow the Battle Group Commanders systems to be built correctly the first time based on the latest technology.

How has this new improvement been applied?
A stop work order on the existing battle group command facilities has been implemented at NNS for CVN 75. A Battle Group Commander is expected to be assigned to this ship late in 1997. At this time meetings will commence to define these facilities. A change order will be put in place to release the stop work and the work will be executed during the PSA. The battle group command facilities aboard the CVN 75 will be built one time, correctly.

What were the results and lessons learned in developing this improvement?
When working with an existing contract it is critical to work closely with the shipbuilder to implement such a change. Consideration must be given to the GFE and CFE associated with this change.

What other information would help another program evaluate its applicability towards their program?
Coordination with other ongoing changes is imperative and must be controlled by the government.

Configuration Management

NAVAIR 703/604–0916x5304 – phone
Salvador, Mark 703/604–0808 – fax
Harpoon/SLAM/SLAM-ER Mark_Salvador@LAN–EMAIL.PEOCU.NAVY.MIL

PMA–258
1213 Jefferson Davis Hwy., Room 703
Arlington, VA 22246

What program are you with?
PMA–258 Stand-Off Weapon Systems

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson Learned: A Sole-Source Contractor has little incentive to reduce its engineering and logistic support costs or provide a better quality product.

Give a description of this idea and how it fits in the program:
The Harpoon/SLAM/SLAM-ER Program has implemented significant Acquisition Reform Initiatives because of DOD Policy and also at the request of the prime contractor and its sub-contractors. The overarching vision of these initiatives was to allow the prime contractor to reduce production and life-cycle cost and produce a better product by giving the contractor the latitude and authority to implement changes in design, materials or processes.

The subsequent changes included eliminating unnecessary testing requirements, utilizing commercial materials, parts and processes, eliminating requirements that were no-value added cost drivers and re-evaluating and/or eliminating sub-contractor requirements. These changes have reduced production cost at the prime contractor and at the sub-contractors.

How is it innovative and creative?

How has this new improvement been applied?

What were the results and lessons learned in developing this improvement?
By eliminating hardware requirements, the contractor reduced cost in production. The same result was achieved at subcontractors. These contractors also settled gripes and issues that have existed for several years. The prime contractor used its authority to make hundreds of minor changes, and some major, with little government oversight. By giving change authority to the prime contractor, responsibility for these changes is also given to the contractor.

The contractor will provide a similar quality product but not necessarily a better one. This becomes very apparent when trying to achieve a meaningful warranty on a product. The contractor wants the authority to make changes as desired and eliminate government oversight, but does not want the responsibility or liability associated with that authority. Being a sole-source contractor there is no incentive to provide better quality or take on responsibility/liability for a meaningful product warranty. There is no additional profit in better quality or a warranty, only additional risk.

In addition, the contractor's infra-structure does not necessarily decrease. It may actually increase. The oversight originally provided by the government is now the contractor's responsibility. The government now must pay for additional contractor oversight, but the contractor, in its unwillingness to take responsibility, still requires the government safety blanket if it makes a mistake.

The contractor wants less requirements and more business, to increase its profit margins. Although the contractor will provide you a cheaper product, it may not be a better one.

What other information would help another program evaluate its applicability towards their program?
This may be applicable to all programs in production with a sole-source contractor.

Configuration Management

NAVSEA 703/418–6074 – phone
Gauthier, Capt. Maurice 703/418–2527 – fax
LPD 17 Amphibious Transport Dock Ship Program gauthier_maurice@hq.navsea.navy.mil
PMS 317
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?
LPD 17 Amphibious Transport Dock Ship Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of Full Service Contractor to create LPD 17 Product Model in an Integrated Product Data Environment

Give a description of this idea and how it fits in the program:
TEAM 17 procurement has required the Full Service Contractor to create the LPD 17 product model in an Integrated Product Data Environment which will serve as the digital, life cycle management tool for the life of the class.

How is it innovative and creative?

How has this new improvement been applied?

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Configuration Management

NAVSEA 703/602–4587 – phone
Edge, Roberta B. 703/418–1163 – fax
LSD 41 (CV), Amphibious Warfare Program
PSM 3771
NC3/8E26

What program are you with?
PEO CLA PMS377 Amphibious Warfare Program
LSD 41(CV) Shipbuilding Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Initialization of Micro-SNAP at Load COSAL/Shipboard SNAP Initialization at Ship's Delivery.

Give a description of this idea and how it fits in the program:
The current SNAP initialization process takes the load COSAL and a current SNAP extract and forces them together. At ship delivery, this Load COSAL can be a year old. Since Load COSAL, additional configuration information may have been reported and/or the allowances may have changed. Allowance calculations, due to reprovisioning factors, can change from the time the initial COSAL is generated and the time the SNAP database is built for ship delivery. Load COSAL must be calculated in advance of ship delivery to ensure sufficient time to purchase and stow material. Many new construction ships started out as WSF ships, reporting to Level A of the Weapons System File (WSF) via the V30 process. In order to produce a SNAP extract (which

cannot be made from a WSF ship) the database is required to be converted from V30 to V09 format to conform to SCLSIS. If the SNAP extract is performed at delivery, allowances will differ from those computed at Load COSAL, causing the material quantity on hand to not equal what is required at that moment. This causes configuration to be supported by outdated allowances.

Utilizing the procedure stated in paragraph 3, SNAP initialization will occur at the time of Load COSAL using Micro-SNAP which is maintained at the Supervisor of Shipbuilding. Allowance and configuration information from subsequent UASIs and Mini-ASIs are used to order material, and to keep what will become the ship's database current. During the time between Load COSAL and ship delivery, Mini-ASIs are used to calculate new allowances for the ship's continuously changing configuration. These are loaded in ROMIS MMS for material ordering and management at the Supervisor's facility. ROMIS MMS will also translate these new requirements in IA9 format. The IA9 formatted requirements will be forwarded to the Shipbuilder for incorporation into the Baseline Asset File (BAF). The ASI, UASI and Mini-ASI will provide periodic updates to Micro-SNAPs configuration and allowance data. This will preclude many of the synchronization problems which occur with configuration and allowance data when the SNAP database is built a year or so after the Load is extracted.

At the time of ship delivery, updated piece part storeroom information that is in the Shipbuilder's BAF but was not included in the ASIs, such as quantity on hand, quantity on order and bin location, will be joined with the data in Micro-SNAP to build the SNAP database. The allowance information used will be the quantities in Micro-SNAP that were computed at Load COSAL and then maintained by Mini-ASI. The latest configuration and allowance information possible is then available for building the SNAP database at ship delivery.

How is it innovative and creative?
See paragraph 4 above.

How has this new improvement been applied?
This procedure has been applied to LSDs 49, 50, 51 and currently on LSD 52. SUPSHIP New Orleans maintains the Micro-SNAP system. Input for ASI, UASI and Mini-ASI is received by the Configuration Data Manager, the Technical Support Activity, the Shipbuilder, SUPSHIP, NAVMASSO, FOSSAC and NAVSEALOGCEN and is loaded on a monthly basis as updates in Micro-SNAP.

What were the results and lessons learned in developing this improvement?
Using this procedure provides an obvious improvement to the level of support consistent with the ship's configuration. This procedure provides a database at ship's delivery that contains the necessary data elements and data relationships required for supply support, SNAP operations and life cycle management.

What other information would help another program evaluate its applicability towards their program?
Obtain a copy of the "LSD 41(CV) New Construction SNAP II Initialization and Outfitting Procedures" prepared by Naval Weapons Station Concord as a guide in developing SNAP initialization procedures.

Configuration Management

NAVSEA 703/602–7280 – phone
Obert, Kathy 703/602–5998 – fax
Aircraft Carrier Program Office obert_kathleen_c@hq.navsea.navy.mil
PEO CLA (PMS 312)
Naval Sea Systems Command
Jefferson Davis Highway
Arlington, VA 22242–5160

What program are you with?
Aircraft Carrier Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Design Budget for CVN 76

Give a description of this idea and how it fits in the program:
Design Budgeting is a process by which the Government schedules the release of final specifications and GFE equipment delivery schedules after the award of the ship contract and after the target cost, target profit, target price, ceiling price and ship delivery schedule have been established. Schedule "X" contains the dates by which various GFI and equipments are to be delivered to the shipbuilder. The shipbuilder has built his detail design and production schedule around the dates contained in Schedule "X".

How is it innovative and creative?
Design Budget provides the Navy with a means for delivering the most capable, current ship possible within the allotted ship construction schedule, while reducing the number of change orders required. In the past, all drawings were submitted to the contractor when the shipbuilding contract was awarded. Because of the time between the award of the ship contract and delivery of the aircraft carrier (8 years), many of the communications and electronic systems on the ship were already obsolete at ship delivery. Thus, it became commonplace to modernize or even completely replace these types of systems during the post availability period following ship delivery.

How has this new improvement been applied?
Design Budget is part of the original CVN 76 ship contract.

What were the results and lessons learned in developing this improvement?

- Each Design Budget system must have a fallback position. This fallback position should change as the program progresses.
- Whereas, the Government requires contractors to provide some kind of cost and schedule control system, there isn't much in place for an intra-Government cost and schedule control system.
- Design Budget is not an "all or nothing" process. Information should be provided to the shipbuilder in intervals that meet his Build Schedule.

What other information would help another program evaluate its applicability towards their program?
Determine the nature of the technology of the particular system. The more evolutionary a system is, the further to the right it should appear in the delivery schedule.

CONTRACTING

Contracting

NAVAIR 703/604–2860x8782 – phone
Prevatt, CDR R. 703/604–2406 – fax
IDECM Prevattrm.ntrprs@navair.navy.mil
PMA272
PEO(T)/PMA272
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: IDECM (Integrated Defensive Electronic Countermeasures)

What is the name of your new idea, approach, process innovation, or lesson learned?
Electronic Data:

RFP
Proposal Evaluation
Source Selection Brief
Electronic CDRL Submission
Electronic Bulletin Board Established

Give a description of this idea and how it fits in the program:
The RFCM program released their RFP, Evaluated Proposals, and did a paperless briefing to the SSAC for their source selection. Upon contract award the RFCM program established an electronic
bulletin board for all unclassified CDRL submissions, agendas, master schedule, briefings, action items and cost and schedule data.

How is it innovative and creative?
RFCM did the first paperless source selection at NAVAIR.

How has this new improvement been applied?
Electronic submission of CDRLs has made the receipt and review process more efficient. The paperless source selection eliminated reams of paper so closely associated with traditional source selections.

What were the results and lessons learned in developing this improvement?
Source Selection was efficient, however, more up front training,
define page limits, and methods bidders scan in data would have
improved the process.

What other information would help another program evaluate its applicability towards their program?

Contracting

SPAWAR 703/602–9367 – phone
Burkett, Mr. David 703/602–7252 – fax
Defense Message System
PD15P6
SPAWAR
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
DMS, BLII, and NAVMCS II

What is the name of your new idea, approach, process innovation, or lesson learned?
Streamlined Contracting for Services

Give a description of this idea and how it fits in the program:
Contractors provide oral proposals when bidding on future Requests for Proposals (RFPs) particularly on service type contracts. This would reduce the acquisition processing time by at least 30 days or more. Each oral proposal can be evaluated by the TEB/CARP Team immediately. Then the scores could be added and a recommendation for award could be made within 30 days vice the normal 60+.

How is it innovative and creative?
Allows acquisition cycle on these type awards to be cut by 50%.

How has this new improvement been applied?
I believe it was utilized once in SPAWAR very successfully.

What were the results and lessons learned in developing this improvement?
The procurements must be very tight and well defined. This is certainly not applicable to all contracts.

What other information would help another program evaluate its applicability towards their program?

Contracting

SPAWAR 703/602–8426 – phone
Bryant, LCDR Kathleen 703/602–7252 – fax
NAVMCS II bryant@smtp–gw.spawar.navy.mil
PMW–152
2451 Crystal Drive
Arlington, VA 22245–5200
What program are you with?
NAVMCS II

What is the name of your new idea, approach, process innovation, or lesson learned?
N/A

Give a description of this idea and how it fits in the program:
System development of a COTS-based systems were greatly accelerated by having the in-place omnibus contractor act as the "prime" to manage the integration of software/hardware provided by the various subs. The use of a support contractor let us avoid the lengthy contracting process of RFPs and the source selection process. Since the support contractor had been selected through a competitive process, no open competition rules were violated. Note that the scope of the omnibus contract needs to be broad enough to include this type of system integration function.

How is it innovative and creative?
Maximum utilization of resources at hand, and the ability to scope out the requirements for future omnibus contracts.

How has this new improvement been applied?
Yes, Several programs successfully.

What were the results and lessons learned in developing this improvement?
See above.

What other information would help another program evaluate its applicability towards their program?
See above.

Contracting

NAVSUP 757/631–3586 – phone
Scobey, Nancy (White) 757/631–3579 – fax
Navy Exchange Service Command white_nancy@nexnet.navy.mil
Personal Telecommunications Services
Contracts Division, Code K
3280 Virginia Beach Blvd.
Virginia Beach, VA 23452–5724

What program are you with?
Navy Exchange Service Command Personal Telecommunications Services

What is the name of your new idea, approach, process innovation, or lesson learned?
Innovative Private Party Venture – Bundling of Variety of Telecommunications Services

Give a description of this idea and how it fits in the program:
The idea was to provide a wide variety of personal telecommunications services to military members worldwide; to provide consistent rates for all locations and for those rates to be equal to or less than those available to the civilian community; to provide consistent levels of service regardless of location and size of miliary installation (no "cherry picking"); maintain same or improved level of revenue for contribution to MWR funds and to accomplish these challenges at no cost to NEXCOM or the government. An additional challenge was to keep pace with the rapidly challenging telecommunications technology. Industry and military said it couldn't be done.

How is it innovative and creative?

How has this new improvement been applied?

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Contracting

SPAWAR 703/602–4045 – phone
Lai, CDR Janice 703/602–7252 – fax
BLII laij@smtp–gw.spawar.navy.mil
SPAWAR PMW 152
2451 Crystal Drive, Room 706
Arlington, VA 22245–5200

What program are you with?
BLII

What is the name of your new idea, approach, process innovation, or lesson learned?
N/A

Give a description of this idea and how it fits in the program:
We can not keep acquiring in a vacuum. The total requirement must be looked at when contracting for a solution. This means taking a cross programmatic look to ensure one person's solutions is not another base's nightmare. We must take a broader view and have the contract vehicles that go from A to Z when looking at addressing a problem. This may mean fewer contracts but ones which are more encompassing that will give bigger bang for the buck. The ViViD contract is a prime example — it has been expanded a great deal from what was originally planned.

How is it innovative and creative?
More common sense. We must ensure that what we are contracting for in one area of the DON does not put another base, entity, etc. into an untenable position. We must take an integrated approach to IT.

How has this new improvement been applied?
Hopefully, it is a hard lesson personnel putting future contracts together will apply.

What were the results and lessons learned in developing this improvement?
See above.

What other information would help another program evaluate its applicability towards their program?
See above.

CONTRACTING – ALPHA CONTRACTING

Contracting – Alpha Contracting

NAVAIR 703/604–2860X8747 – phone
Brady, Lee703/604–2405 – fax
AN/ALE–50 Advanced Airborne Expendable Decoy Bradylc.ntrprs@navair.navy.mil
PMA272D1
PEO(T)PMA272
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: AN/ALE–50 Advanced Airborne Expendable Decoy

What is the name of your new idea, approach, process innovation, or lesson learned?
Alpha contracting and the use of a cost model as the basis of a proposal.

Give a description of this idea and how it fits in the program:
The Navy, the Air Force, Raytheon, DCMC, and DCAA all worked together to develop a cost model for production decoys. The cost model was built up from vendor quotes and contractor rates. Cost estimators from the services and DCMC and DCAA worked directly with the contractor to reach agreement of the rates. They also had access to the vendor quotes as they came in. Eventually this cost model became Raytheon's proposal for a production cost commitment curve type contract.

How is it innovative and creative?
The really great thing about this approach was that because DCMC and DCAA had worked directly with the other team members in developing the cost model when the proposal was officially submitted they were able to do their audit and have a letter in the mail to us within two hours instead of two months.

How has this new improvement been applied?
This improvement worked out so well for us that we are applying it to our next production contract.

What were the results and lessons learned in developing this improvement?
The lesson to be learned here is that if you involve all the stakeholders up front and concurrently you can significantly reduce the time required to forward price a contract. Not only did we shorten the time DCMC and DCAA require to do their audits but we also cut down on negotiation time because the contract negotiator only had to work on those few exceptions which remained after the government team and the contractor were finished with the cost model. Bottom line is "concurrency and agreeing early save time later".

What other information would help another program evaluate its applicability towards their program?
All they need to know is if they have a contract to place in the near future. If so this is the way to go.

Contracting – Alpha Contracting

NAVAIR 703/604–2119x3375 – phone
Diehl, Mr. Mark 703/604–2968 – fax
CASS EO+ DIEHLDM.JFK@NAVAIR.NAVY.MIL
PMA–260 (AIR–2.5.1.7.2)
1421 Jefferson Davis Highway
Arlington, VA 22243–5120

What program are you with?
NAVAIR (PMA–260)/CASS ACAT II Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Lessons learned from Alpha Contracting

Give a description of this idea and how it fits in the program:
Contracting was directed for use by NAVAIR. As directed, contracting officers and contract specialists were to work in unison to develop the Contractor's proposal and cost position for a specific procurement. By jointly reviewing the requirements and associated efforts the goal was to eliminate the need for formal negotiations. The final product is a certifiable proposal, developed with direct input from Contractor and Government personnel that would reflect an agreeable position to all parties.

How is it innovative and creative?
Seeks to reduce time from RFP release to contract award by having the Government and Contractor work cooperatively to develop the Contractor's proposal for a procurement and because of joint buy-in, minimize or eliminate formal negotiations and reviews.

How has this new improvement been applied?
Contract RFP was generated by the Government. One week after delivery to the Contractor, a Pre-Proposal Conference was held to enable the contractor (both the prime and the sub-contractor) to raise any issues or questions. Specific attention was given to clarifying scope of the proposed effort. A series of meetings were then held at NAVAIR and contractor facilities to first review format for submission of Basis Of Estimate (BOE) sheets to the Government and then actual data. The latter involved detailed analysis of contractor estimates of required effort and hours to accomplish specific tasks. After the Sub-contractor submitted a proposal to the Prime Contractor, another joint meeting was held to conduct an informal review. Formal submission of the Prime Contractor's proposal to the Government was made and a series of formal negotiations between the Government and the Prime led to contract award. DCAA, DCMC and Navy Price Fighters were included in the various BOE and proposal reviews.

What were the results and lessons learned in developing this improvement?
Including DCAA during BOE and Contractor proposal reviews enabled them to complete their audit of the proposal in half the normal time. Formal negotiations were expedited somewhat due to the thorough review of BOEs. It was hoped that working together with the Contractors in an IPT forum would enable them to reduce the time required for internal review, approval and certification of bid and final settlement during negotiations. This was not realized. There appeared to be little streamlining of the contractor internal approval process. Additionally, it became obvious that the Contractors did not send people empowered to make decisions; or they chose not to exercise that authority.

What other information would help another program evaluate its applicability towards their program?
1) Initial Contractor proposal was inadequate and incomplete, possibly due in part to Government pressure to expedite the process;

2) Expected Contractor buy-in, as a result of IPT forum did not result in any streamlining of Contractor internal approval/certification process. Recommendations for next evolution.
- Include Contractor earlier – Hold a joint review of the Government's Statement of Work (SOW) before finalizing the RFP.
- Insure the Contractor is given sufficient time to generate a complete and accurate set of BOEs and contract proposal.

- Convene a joint review of the proposal and direct the Contractor to come prepared with the resources to make decisions as to scope and effort – without having to return to management for a decision. Possessing only limited ability to force the Contractor to modify internal review procedures, emphasis should be placed on early definitization of Government requirements and convincing the Contractor to send only "Decision Makers" to final reviews and negotiations.

Contracting – Alpha Contracting

NAVAIR 703/604–2860x8771 – phone
Hogan, Christine 703/604–2405 – fax
AN/ALR–67(V)3 hogancm@ntrprs.navair.navy.mil
PMA272B1
PEO(T)/PMA272
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: AN/ALR–67(V)3 Radar Warning Receiver

What is the name of your new idea, approach, process innovation, or lesson learned?
Alpha Contracting

Give a description of this idea and how it fits in the program:
Alpha contracting is a process that creates a Govt/Industry team whose main goal is awarding a fair and reasonable contract in the shortest amount of time. The alpha process has been used successfully on many programs. The ALR–67(V)3 program chose this method because of the need for contract award NLT 1 December to avoid work stoppage and the relatively low dollar amount ($10M).

How is it innovative and creative?
Alpha contracting shortens the procurement process and gets industry involved up front and early in a sole source procurement.

How has this new improvement been applied?
Alpha contracting was applied to the ALR–67(V)3 Test & Integration Support contract that was awarded to Hughes Aircraft Company in November 1996. A govt/industry Alpha contract kickoff meeting was held prior to solicitation release to define the requirements and set the Alpha contract schedule. As a result of this meeting, the number of PID revisions was reduced and the schedule was adhered to by all.

What were the results and lessons learned in developing this improvement?
The result was a fully negotiated contract awarded 4 months after initiation. A lesson learned during fact-finding was that the specific requirements of each phase of the Alpha contract process must be understood by all parties. Active participation of DCMC and DSAA and a stable budget is imperative to success.

What other information would help another program evaluate its applicability towards their program?
The ALR–67(V)3 program chose this contracting method because of a need to award quickly and to reinforce the team approach to the program.

Contracting – Alpha Contracting

NAVAIR 703/604–6100x3559 – phone
Meade, Mr. James S. 703/604–3063 – fax
JSOW meadejs.jfk@navair.navy.mil
AIR–2.2.2.4 (supports PMA–201)
NAVAIR
AIR–2.2.2.4
1421 Jefferson Davis Highway
Arlington, VA 22243–5210

What program are you with?
JSOW AGM–154A/B/C

What is the name of your new idea, approach, process innovation, or lesson learned?
Lessons learned from using Alpha Acquisition under JSOW procurements.

Give a description of this idea and how it fits in the program:
The term "Alpha Contracting" was coined by the LAMPS/IBM team to describe the new acquisition streamlining process which they were implementing. As a broad concept, Alpha Contracting refers to the teaming of the Government and the Contractor during the early stages of the acquisition process as opposed to waiting until the final stage of the process. One of the functions of teaming is to identify duplicative, burdensome, and costly oversight requirements which do not provide value added to the Government. Making the Contractor part of the planning process allows them to acquire a better understanding of actual Government requirements and, as a consequence, propose more cost effective and innovative solutions in designing and producing the required supplies.

Summary of Alpha acquisition benefits:

- Mutual understanding of the SOW requirements
- Agreement on appropriate scope and hours/task prior to final proposal submittal
- Open, yet controlled, communication early in the process
- Reduces the procurement cycle by up to six months
- Ensures efficient human resource utilization by eliminating the need to re-do tasks (spreadsheet standardization, single technical review, coordinated fact-finding, early coordination of documentation)
- Ensures money is spent efficiently through early contractor involvement and thorough Government communication by:
  - creating sanity check against inclusion of impossible or low value added tasks
  - highlighting efficient means to accomplish underlying Government requirements

Alpha acquisition's fundamental requirements:

- Contractor and Government contracting personnel be included in the process from the start
- Technical and contracting functions combined into a seamless process
- Total effort broken into understandable "pieces"
- Contractor and Government must challenge existing processes and be willing to change
- Contractor and Government must agree to be totally honest
- Contractor and Government must trust each other
- Contractor and Government must take joint ownership of the process
- A Joint Team with a common purpose, vision, and desired results

It should be emphasized that while the combined team often operates together, the contractor is solely responsible for the production of their proposal, and the Government is solely responsible for the contents of the contract.

How is it innovative and creative?

Offers lessons learned from using the Alpha Acquisition process and suggested improvements.

How has this new improvement been applied?

Alpha acquisition has been used on numerous major procurements in NAVAIR. Examples include LAMPS Upgrade, F/A–18 E/F LRIP, F–414 Engine E&MD, JSOW AGM–154C E&MD and AGM–154A/B LRIP, EA–6B Universal Exciter, Wing Center Section, and Block Upgrades, and E–2C Mission Computer Upgrade.

What were the results and lessons learned in developing this improvement?

The results of this process are as follows:

- Contract award 4 months after MS–II approval <30 days from proposal receipt to contract award 75% reduction in contract length compared to similar program 70% reduction in Government oversight minimal "after the fact" contract changes.

The Lessons Learned are as follows:

- Controlled release of information
  - speak with one voice on schedule, budget and quantities
- Firm up requirements prior to detail cost estimating
- Entire team needs to be clear on what assumptions are acceptable
- Communication
  - If you don' know or understand a point, ask for guidance
- Clearly define roles of DCMC/DCAA early
- Team leaders must understand (memorize) evaluation criteria and evaluate the proposal to the "approved criteria"
- Use evaluators who either developed the RFP or are extremely familiar with it, thoroughly understand the Specifications and Statement of Work
- Evaluators need to be experienced in the type of system being evaluated
- Evaluators need to dedicate their entire time and attention to the evaluation
- Locate all evaluators at the same site
- Problem evaluations are not the result of individual evaluator's failures
  - lack of training
  - unavailability of proper Team leaders
  - improper selection

hat other information would help another program evaluate its applicability towards their program?

The JSOW AGM–154C program conducted a survey of all the individuals involved in the Alpha Acquisition process to determine if the process was an improvement over the old way of doing business. As noted by the results, alpha is an improvement over prior process:

AGM–154C PREPARATION/EXECUTION TIME

	RFP	PROPOSAL	EVALUATE
)O LONG	12%	0%	10%
3OUT RIGHT	88%	70%	65%
)O SHORT	0%	30%	35%

AGM–154C LEVEL OF REWORK

REATER THAN PREVIOUS DEALS	0%	
3OUT THE SAME	23%	
ESS THAN PREVIOUS DEALS		77%

AGM–154C LEVEL OF SATISFACTION

Gov't Evaluation	Overall Process	Process
UNSATISFACTORY	0%	0%
Marginal	0%	0%
SATISFACTORY	13%	16%
Superior	48%	40%
OUTSTANDING	39%	44%

Contracting – Alpha Contracting

MARCOR 810/574–8361; DSN 786–8361 – phone
Miller, Thomas H.810/574–5472 – fax
Light Armored Vehicle Millerth@cc.tacom.army.mil
PM, LAV
US. Army Tank-automotive and Armaments Command
ATTN: AMCPM–LAV–P
Warren, MI 48397–5000

What program are you with?

Light Armored Vehicles (PM, LAV, located at the U.S. Army Tank-automotive and Armaments Command, Warren, MI (TACOM)).

What is the name of your new idea, approach, process innovation, or lesson learned?

"Alpha Contracting".

Give a description of this idea and how it fits in the program:

"Alpha Contracting" is an innovative contracting process originally developed by the Air Force, and later adopted by the Army. The standard contracting process is very linear, and includes countless steps performed in a "heel-to-toe" fashion (complete one before moving on to the next). This process is based on the old stovepipe concept, and emphasizes "throwing things over the fence" to the next person. Alpha Contracting emphasizes conducting actions concurrently, which necessitates an unprecedented level of teaming with the contractor. Under Alpha Contracting, the Government/Contractor team develop/negotiate the contract requirements, and negotiate/evaluate the proposal concurrently. When the proposal is submitted, it is pre-negotiated and ready for contract. The result is a significant savings in contracting lead time.

How is it innovative and creative?

Use of Alpha Contracting significantly decreases time required to award contracts. It also facilitates teaming with the contractor, and breaking down barriers between functional areas, resulting in increasedefficiency in the contracting process, increased communication, and a decrease in disagreements between the Government and contractor.

How has this new improvement been applied?

Alpha Contracting has been applied to PM, LAVs major (sole source) programs with great success. The LAV Air Defense, Saudi Arabian National Guard LAV, and Mobility Block Improvement Programs have used Alpha Contracting with months of savings in contract lead time; as well as a greater level of trust between us and our major contractors.

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Contracting – Alpha Contracting

NAVAIR 703/604–2540x4827 – phone
Mitchell, Fleetwood 703/604–2490 – fax
EA–6B UEU mitchellf.ntrprs@navair.navy.mil
PMA–2344
1421 Jefferson Davis Highway
Arlington, VA 22243–5120

What program are you with?
EA–6B Universal Exciter Upgrade (UEU)

What is the name of your new idea, approach, process innovation, or lesson learned?
ALPHA Contracting/Communication (ALPHA/COMM)

Give a description of this idea and how it fits in the program:
Use of the tailored ALPHA/COMM methodology enabled an open dialogue via multiple communication resources. The open exchange of ideas between the parties continued until contractual terms and agreements were reached. This technique, using detailed information developed by the Government/Contractor UEU Technical Team, provided the Navy's Contract Specialists the opportunity to concurrently accomplish up-front early negotiations, while fact finding efforts were in process.

How is it innovative and creative?
Use of resident communication skills and electronic media capabilities enabled the Navy to capitalize on the mix of new and old media which is available through the Information Highway.

How has this new improvement been applied?
The ALPHA/COMM methodology empowered the Contract Specialist to approach the vendor with an openness not previously allowed. Improved communication, via the electronic media, facilitated faster and timely inputs for the development of responses.

What were the results and lessons learned in developing this improvement?
The open dialogue maintained during the contracting phase of this program enhanced the trust between the parties which, in turn, resulted in a faster negotiation and development of a feeling of "WIN-WIN" for all concerned.

What other information would help another program evaluate its applicability towards their program?
Since the ALPHA/COMM methodology enables an efficient and un-restricted adaptation of salient contracting requirements, the only limitations would be those imposed by the user.

Contracting – Alpha Contracting

NAVAIR 703/604–0885x3617 – phone
DeMars, LtCol Tom 703/604–1307 – fax
Predator MAE UAV demars@lan–email.peocu.navy.mil
PMA–263P
Program Executive Office
Cruise Missiles and Joint Unmanned Aerial Vehicles
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
PMA–263

Predator
Medium Altitude Endurance Unmanned Aerial Vehicle (MAE UAV)

What is the name of your new idea, approach, process innovation, or lesson learned?
Procurement Team Concept (Alpha Acquisition Process)

Give a description of this idea and how it fits in the program:
The Alpha Acquisition Process involves the use of a procurement integrated product team (IPT) comprised of the program office, contracting office, DCAA, DCMC and the contractor. The team discusses the requirements (e.g., SOW, SPECS, PID, CDRLs) prior to RFP release to ensure that all IPT members, both Government and contractor, clearly understand the requirements. Upon reaching an understanding on the requirements, the RFP is issued. The RFP requires initial pricing information which is reviewed by the IPT. The intent of the initial review is to reach an understanding and agreement on all cost elements (i.e., proposed hours, rates, travel cost, and material) prior to proposal submission. This drastically decreases the traditional negotiation process since the majority of the requirements are clearly understood by the contractor and the proposed costs are essentially agreed upon. The end result is a streamlined process for negotiating and awarding contracts.

How is it innovative and creative?
The Alpha Acquisition Process gets the contractor and Government functional experts involved in the proposal evaluation phase much earlier than in the normal acquisition process.

How has this new improvement been applied?
This improvement has been implemented in all major acquisitions for the Predator MAE UAV program.

What were the results and lessons learned in developing this improvement?
The implementation of this improvement has resulted in shorter procurement acquisition lead times and has eliminated the majority of the problems related to ambiguous requirements and misunderstandings of the requirements.

What other information would help another program evaluate its applicability towards their program?
In order for this improvement to work, the contractor and Government must trust each other. This process will not work when there is an adversarial relationship between the Government and contractor.

Contracting – Alpha Contracting

SPAWAR 703/602–4402 – phone
Reinig, Mr. Mark 703/602–2027 – fax
CDF reinig@smtp–gw.spawar.navy.mil
SPAWAR PMW 163–3A

What program are you with?
Combat Direction Finding (CDF)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of a Cost/Pricing Integrated Product Team (CIPT) to expedite contract award.

Give a description of this idea and how it fits in the program:

The program used an Integrated Product Team composed of program office personnel, contracting office personnel and the prime contractor to develop the contractor proposal and reach agreement on cost quickly.

How is it innovative and creative?
The government and contractor worked together early in the process to establish the cost of the CDF systems under this production contract.

How has this new improvement been applied?
This improvement has been applied to other program within the program office with similar success.

What were the results and lessons learned in developing this improvement?
This process results in a dramatic reduction in the amount of time between RFP release and contract award. DCAA audit period was reduced from 90 days to 1 week.

What other information would help another program evaluate its applicability towards their program?
This process is effective in sole-source situations.

Contracting – Alpha Contracting

SPAWAR 703/602–4433 – phone
Sherman, LCDR Kevin 703/602–5327 – fax
CHBDL–ST shermank@smtp–gw.spawar.navy.mil
PMW 163–3B

What program are you with?
CHBDL–ST

What is the name of your new idea, approach, process innovation, or lesson learned?
Alpha Contracting Process

Give a description of this idea and how it fits in the program:
It involved the Government and Contractor almost simultaneously developing a cost proposal.

How is it innovative and creative?
Since both sides where involved from the beginning, each knew what the other expected and any disagreements that surfaced were identified early on in the process. Instead of waiting for the contractor to develop a complete proposal, having the government examine that proposal, comment on it, and then return it to the contractor to await modification. The government was there as the proposal was being finalize and could insure that there were no mistakes or misunderstandings in the final product. Conversely, since the government was there during development, the government reps know how the numbers were developed and where they came from.

How has this new improvement been applied?
The negotiation of the production options on the CHBDL–ST contract with Lockheed Martin Wideband Systems was a cumulation of a phenomenal amount of work by a team of SPAWAR, DCMC, DCAA, government support contractors and Lockheed Martin Wideband Systems. The government teams efforts were lead by Marcia Rutledge and Dave Lowe. The approach taken was an "Alpha Contracting" style, where the prime contractor is involved as a team member for over 80% of the discussions from day one.

What were the results and lessons learned in developing this improvement?

This effort began in early August and generated an agreement in principle on price that was reached in late October. Lockheed Martin signed what turned out to be the final version of the contract in early December. The difference in time from agreement to signing represents the one negative of the alpha contracting process. That is that the paperwork (final SOW, PR package, contract mod, and clearance) was delayed until the end of the process. On the positive side, the negotiation was completed quickly, and resulted in the final contract being almost 20% less expensive than the original proposal.

What other information would help another program evaluate its applicability towards their program?
The government needs to foster an atmosphere of trust with the contractor so that both sides feel they are mutually benefiting from the process. This process would not work where an antagonistic relationship exists.

Contracting – Alpha Contracting

NAVAIR 805/989–5932 DSN: 351–5932 – phone
Stone, Freeman 805/989–5378 – fax
MQM–8G(EER) Aerial Target Program stonef@smtpgw.mugu.navy.mil
PMA–208B2
PEO(CU)
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
PMA–208 Aerial Target And Decoy Systems

What is the name of your new idea, approach, process innovation, or lesson learned?
Alpha Contracting Process

Give a description of this idea and how it fits in the program:
Incorporated the NAVAIR Alpha process into our FY–97/98 MQM–8G(EER) target acquisition. This involved bringing in all participants including the contractor, Contracting Officer, Acquisition team, and DCAA during the initial acquisition team meeting. The sole source nature of the MQM–8G(EER) program lends itself to this process.

How is it innovative and creative?
This is the first time this approach has been used on the MQM–8G(EER) program. The Alpha contracting approach encourages constant dialog among all participants thereby expediting the exchange of information and the overall contracting process.

How has this new improvement been applied?
Early involvement of the participants has permitted communications on topics that are normally reserved for discussions during final negotiations.

What were the results and lessons learned in developing this improvement?
The total time for acquisition process is expected to be significantly reduced.

What other information would help another program evaluate its applicability towards their program?
Training is very important to equip the team with the necessary tools to effectively implement this process. Recommend NAVAIR conduct formal training prior to the initiation of the acquisition process.

Contracting – Alpha Contracting

NAVAIR 703/604–4480x7341 – phone
Wilkening / Maras, Clifford / Tom 703/604–4442 – fax
PMA–202 Aircrew Systems (NACES) P3I Program
PMA–202C
NAVAIR – JP2 Room 1000

What program are you with?
PMA–202 Aircrew Systems – NACES Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson learned in contracting with foreign contractor

Give a description of this idea and how it fits in the program:
During the NACES P3I program as the program concept, structure, and program plan evolved, the contractor proposal was developed in parallel with the program plan. Program, technical, and contracting personnel together participated in the evolution, trade-offs, and background discussions. This reduced culture, and language barriers, personality conflicts and up-front contracting award time. Trade-off of extra personnel involved up front was worth the extra cost to the program. An improved definition of responsibilities, involvement, schedules and performance requirements were the result. In addition rather than conducting separate field audits, by combining the audit process with negotiations resulted in reduced overall time and better correlation of substantiating data in support of actual statement of work activities.

How is it innovative and creative?
A more common sense approach to contracting with foreign companies. This can apply to United States contractor also.

How has this new improvement been applied?
It was applied during NACES P3I Program.

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Contracting – Alpha Contracting

NAVAIR 919/464–7484 – phone
Winchester, Jon 919/464–8477 – fax
H–46 WINCHEST@ENGR2.NADEPCP.NAVY.MIL
PMA–226
Cherry Point, NC

What program are you with?
PMA–226, H–46 PROGRAM

What is the name of your new idea, approach, process innovation, or lesson learned?
Alpha Contracting for Aircraft Transmission Parts Involving Defense General – Columbus, NAVICP, PMA–226, and the Prime and Major Subvendors.

Give a description of this idea and how it fits in the program:

The material condition existing H–46 transmissions would not support the installation of the DCU transmission upgrade modification. EXPEDITIOUS procurement of replacement transmission gears was required to support MOD install and continued operation of the aircraft.

How is it innovative and creative?

This approach was innovative in the fact that two different ICP'S had procurement cog of the components and delivery schedules must be coordinated because the components were required in sets to support transmission overhaul, and the estimated contract cost exceeded $40M.

How has this new improvement been applied?

A single contract (3 yr forecast) was awarded for the forgings 30 days after requirement identification. The forgings represented on 10% of the total cost but 50% if the component lead time. A follow-up contract was negotiated and awarded 5 mo. Later for the machining of the components. Steel mills were visited by the team to expatiate raw material to forging houses. The team assembled the seven forgings houses for their support of the requirement.

What were the results and lessons learned in developing this improvement?

The results of this effort illustrate what can be accomplish through teamwork and "out-of-the-box " thinking. The admin lead time was virtually eliminated to deliver required transmission gears to the fleet as soon as possible.

What other information would help another program evaluate its applicability towards their program?

Anything is possible with teamwork.

CONTRACTING – COMMERCIAL ITEMS

Contracting – Commercial Items

NAVAIR 301/342–3688x118 – phone
McIlhenny, Kenneth 301/342–3674 – fax
IBIS
PMA2251C
Bldg 420B
47114 Hinkel Circle, Unit #2
Patuxent River, MD 20670–1629

What program are you with?
H–3

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of FAR Part 12, Acquisition of Commercial Items

Give a description of this idea and how it fits in the program:
Use of FAR Part 12, Acquisition of Commercial Items saved approximately three months in the acquisition of H–3 IBIS equipment.

How is it innovative and creative?

How has this new improvement been applied?
Use of FAR Part 12 was applied to the acquisition of H–3 IBIS GFE.

What were the results and lessons learned in developing this improvement?
That a contract could be awarded expeditiously with minimum risk, using FAR Part 12.

What other information would help another program evaluate its applicability towards their program?
None.

CONTRACTING – MULTIYEAR

Contracting – Multiyear

SPAWAR 703/602–7469 – phone
Reinig, Mr. Mark 703/602–2027 – faxCDF
SPAWAR PMW 163–3A reinig@smtp–gw.spawar.navy.mil

What program are you with?
Combat Direction Finding (CDF)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of multi-year contracting for production of CDF systems.

Give a description of this idea and how it fits in the program:
The CDF Lot 4 production contract was awarded as a multi-year contract (basic plus 4 option years. Since the program is in production, there is very little risk in this approach.

How is it innovative and creative?
The use of multi-year contracting is ambitious for the production of a complex system but has significant advantages.

How has this new improvement been applied?
This improvement has been applied to the production of systems for which some inventory is already in the fleet.

What were the results and lessons learned in developing this improvement?
The contracting approach has resulted in significant cost savings due to quantity of unit procured.

What other information would help another program evaluate its applicability towards their program?
This process is effective in production programs.

CONTRACTING – NAVY EXCHANGE

Contracting – Navy Exchange

NAVSUP 757/631–3591 – phone
Donovan, Tim 757/631–3579 – fax
Navy Exchange Service Command t_donovan@nexnet.navy.mil
Contracts Division
3280 Virginia Beach Blvd.
Virginia Beach, VA 23452

What program are you with?
Navy Exchange Service Command

What is the name of your new idea, approach, process innovation, or lesson learned?
Innovative Private Party Contract Venture – Jewelry

Give a description of this idea and how it fits in the program:
The challenge was to improve the jewelry business within the Navy Exchange (NEX) program by contracting out with a private party to invest in infrastructure and provide a professional staff to manage fine jewelry operations within the Navy Exchange on a world-wide basis. A primary objective was to fashion the agreement such that the private party was under contract to help manage the NEX business rather than running their own business within the Exchange.

How is it innovative and creative?
The contract is unique in that the jewelry in NEX stores will be Navy Exchange-owned merchandise but the Contractor will be responsible for providing the proper jewelry mix, for providing a trained staff of salespersons to sell the fine jewelry, and answer customer questions and management of the merchandise, including security. The contractor also guarantees sales based on total Navy exchange sales and the exchange receives a commission based on these guaranteed sales. If exchange sales increase or decrease during the performance period (year), the contractor's guarantee, the exchange still receives its guaranteed commission. If sales exceed the guarantee, the exchange receives more money based upon the percentage commission offered items the actual sales achieved.

How has this new improvement been applied?
This contract will be let for one contractor to manage the top 30 NEX jewelry locations.

What were the results and lessons learned in developing this improvement?
Key lesson learned is to not to restrict contracting methods/language to traditional contracting approaches. In this case, NEXCOM did not want to completely relinquish the business but at the same time, needed to include adequate measures in the agreement to ensure the Contractor was motivated to provide quality jewelry products and services at a savings to the patron while generating profits to support MWR programs.

What other information would help another program evaluate its applicability towards their program?

CONTRACTING – PRICE ANALYSIS

Contracting – Price Analysis

PEO–SCS 703/602–2015 dsn 332–2015 – phone
Palmer, CDR Scott 703/602–0269 – fax
UHF Follow-on (UFO) palmers@spawar.navy.mil
PMW 146C
2451 Crystal Drive
Arlington, VA 22245–5201

What program are you with?
Communications Satellites Program Office (PMW 146), PEO–SCS

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson Learned: Price Analysis versus Cost Analysis for Contract definitization

Give a description of this idea and how it fits in the program:
Conduct market research on similar commercial products or services to determine a price range for the desired product or service. Normalize the results along technical, cost and schedule parameters to gain an equitable basis for judgment. Use the matrix to determine if the submitted contractual price proposal is fair and equitable. The research results also can be used as the basis for price negotiations in the definitization process.

How is it innovative and creative?
Allows the Contracting Officer to quickly determine if a proposed price is fair and equitable. This method also eliminates the need for the contractor to submit a detailed certified cost proposal, saving both time and money for the government. Use of this method was innovative since price analysis had not been used previously on a production contract modification.

How has this new improvement been applied?
PMW 146, SPAWAR and Hughes Space and Communications used this method to definitize an $150 million contract modification in Jan 96. The contract modification called for the design, build and integration of a Global Broadcast Service (GBS) payload onto the last 3 production satellites in the UFO program.

What were the results and lessons learned in developing this improvement?
Use of price analysis allowed the Contracting Officer to definitize the contract modification by Mar 96, saving the government approximately $1 million. A previous modification to enhanced the existing EHF payload on UFO took approximately 1 year to definitize using the traditional certified cost proposal method.
The price analysis method does require a priori knowledge of the product or service being procured. Also, there must be enough commercial products or services available to make the market research results valid. This method works best on performance oriented procurements of a fixed price nature. In highly competitive areas, specific vendor information may be difficult to obtain.

What other information would help another program evaluate its applicability towards their program?
None.

CONTRACTING – PROPOSAL EVALUATION

Contracting – Proposal Evaluation

NAVAIR 703/602–7390 – phone
McLaughlin, Patrick M. 703/602–0593 – fax
Joint Strike Fighter Program Officer McLaughlinP.jfk@NAVAIR.navy.mil
Contract
1745 Jefferson Davis Highway
Arlington, VA 22202

What program are you with?
Joint Strike Fighter Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Joint Strike Fighter Concept Demonstration Program (CDP) Source Selection

Give a description of this idea and how it fits in the program:
Conducted major source selection for CDP using innovation approaches to streamline the process. This competition led to a downselect to two major airframe companies for the next phase of the program.

How is it innovative and creative?
Severely limited proposal lengths; Provided evaluation standards to offerors; Established technical library on the World Wide Web (WWW) RFP distributed on the WWW; Cost models made available to offerors.

How has this new improvement been applied?
Used the techniques to conduct abbreviated major source selection. Proposals received June 1996, contracts awarded five months later.

What were the results and lessons learned in developing this improvement?
Successful award on schedule; no protest received.

What other information would help another program evaluate its applicability towards their program?
Should be applicable to most source selection.

Contracting – Proposal Evaluation

SPAWAR 703/602–5297 – phone
Popik, Vic 703/602–1479 – fax
JMCOMS (SHF SATCOM) popikv@smtp–gw.spawar.navy.mil
176–42A
SPAWAR

What program are you with?
Joint Maritime Communications System

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of oral proposals for hardware acquisition

Give a description of this idea and how it fits in the program:
The program office used oral technical, management, and logistics proposals for acquisition of the SHF SATCOM 7 foot antenna.

How is it innovative and creative?

Use of oral proposals in the TEB process was a first for a SPAWAR hardware acquisition.

How has this new improvement been applied?

Currently applied to only this program.

What were the results and lessons learned in developing this improvement?

Originally, this approach was taken with the intent that it would reduce the time that it would take to evaluate contractor proposals and award a contract. The lesson learned was that in fact, the time to evaluate the proposals was not significantly reduced. TEB members found that it was hard to grasp all of the information presented in one sitting and had to review videotapes of the presentations in order to make a fair evaluation.

A benefit that was realized was the better understanding of the technical proposals by the contracting officer, and the cost analysis group. After the presentations the contractors indicated that they were pleased with the process since it saved them time in the authoring of written proposals.

Although this process worked well with this very simple hardware acquisition, it would not be feasible with a more complex technical proposal. However, oral presentations for the executive overview, the management and the logistics portions of a complex proposal might be useful.

What other information would help another program evaluate its applicability towards their program?

Contracting – Proposal Evaluation

MARCOR 703/492–3300 – phone
Zeitfuss, Walt 703/492–3438 – fax
Advanced Amphibious Assault Vehicle Program wzeitfus@notes.hqi.usmc.mil
991 Annapolis Way
Woodbridge, VA

What program are you with?

Advanced Amphibious Assault Vehicle Program

What is the name of your new idea, approach, process innovation, or lesson learned?

The use of a teaming approach for proposal evaluation.

Give a description of this idea and how it fits in the program:

In the selection of the AAAV Demonstration/Validation phase contractor, the DRPM AAA program office implemented a technical/man-hour teaming approach for the proposal evaluation. Evaluation teams were established for each of 13 technical focus areas that each proposal was to explicitly address (land mobility, software and electronic integration, integrated product teams, modeling and simulation, etc.). Each team consisted of technical, management, and costing experts. The teams were trained in source selection process, SOW and Specification requirements prior to proposal submission. In addition, a full cost evaluation team was used in a traditional role.

The proposal evaluation was a five month, off-site effort. During this effort, a combined, in-depth technical and man-hour evaluation of each proposal was undertaken. The teams varied in size from 5–10 members and were made up of an appropriate variety of program office personnel and technical experts from other government activities. One focus area of each technical team was inconsistencies between the man-hours, labor-mix, and materials identified for the tasks proposed and the outlined technical effort . Overall technical ratings reflected strengths and weaknesses

relating to the adequacy of the man-hours, labor mix, and materials proposed to meet the technical effort.

Because this source selection was a competitive down-select, the selection process had to be rigorous and defendable. A protest was highly undesirable because of the schedule and cost impacts on the program. To maximize the objectivity of the process, the technical evaluation was tempered with the reasonableness of manhours and materials proposed for each task. A cost team also did a complete cost evaluation along traditional lines. The process and results were shared each with the respective offerors.

How is it innovative and creative?

The teaming approach focused the application of talent and time and allowed for a comprehensive, objective, and defendable decision making process. Sharing the process and results with the offeror's ensured they understood the thoroughness and objectivity of the process.

How has this new improvement been applied?

This teaming approach was used to select the AAAV Demonstration/ Validation phase contractor.

What were the results and lessons learned in developing this improvement?

RESULTS

- There was no protest – both contractors outwardly recognized the thoroughness of the process because the results were shared with them.

- The comprehensive nature of the evaluations allowed us to minimize the number of iterations up the source-selection review chain.
- The level of understanding of total proposed system and processes (regardless of resulting winner) by program office personnel (and supporting technical experts) was increased significantly. We all hit the ground running at contract award.
- The process allowed early identification/documentation of risk areas (i.e., an insufficient understanding of particular technical tasks demonstrated by inadequate man-hours/mix proposal).

LESSONS LEARNED

- Teaming offers several challenges and benefits.
- There must be a clear understanding by entire team of product expectations.
- Full understanding of the RFP (particularly SOW and Specifications)
- A well defined process (how effort is going to proceed)
- All evaluation standards need to be fully understood
- There must be a complete understanding of the processes and tools for facilitating team activities.
- It requires an investment in time, but if the process is clear and realistic it will work well.
- Remotely locating the teams was vital, although not insignificant in terms of cost.
  - Both technical and program planning and execution activities have to be collectively evaluated.
- Training and team building prior to the actual evaluation does reduce time needed for the evaluation process, however it must also include the expectations of the source selection teams.
- Evaluation of proposed man-hour/labor-mix is crucial to thorough technical evaluation. There is no other way to do it.

What other information would help another program evaluate its applicability towards their program?

Consider:

- What is the true "cost" of the selection process
- It could be the program if an incorrect decision is made
- An investment of "$x" for source selection over "$y" for the whole acquisition

- How can the PMO maximize the use of all available resources (technical, cost, and otherwise)

CONTRACTING – REPROCUREMENTS

Contracting – Reprocurements

NAVAIR 703/604–1668x2115 DSN: 664–1668x2115 – phone
Szego, George703/604–1730 – fax
TA/AS szego@lan–email.peocu.nayv.mil
PMA–2081D
Program Executive Officer
Cruise Missiles and Joint Unmanned Aerial Vehicles
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
Target Auxiliary and Augmentation Systems (TA/AS)
Aerial Target and Decoy Systems
(PMA–208)

What is the name of your new idea, approach, process innovation, or lesson learned?
Competitive procurement of common equipment on a cyclic basis (a new contract every three years).

Give a description of this idea and how it fits in the program:
TA/AS are the electronic payloads or boxes that are used by more than one aerial target. They are procured commonly to avoid prime vehicle contractor overhead and materiel handling factors while getting the cost reduction benefits of quantity buys. To avoid sole source procurements, a standard style or format for each potential contract has been established. With a performance specification establishing the technical performance characteristics, a contract for source qualification (or first article testing) with four variable quantity options is awarded. During the first year of the contract, the unit is fabricated and subjected to testing. Following successful completion of the source qualification testing, an option is exercised in the second year while the second production option is exercised during the third year. In the fourth year, two events occur. The third production option is exercised and a new second contract for the equipment is awarded. Assuming a new source is selected for the second contract, during the following year the first option on the second contract is exercised if the new contractor passes the first article testing. If the new contractor does not pass the first article testing, the last option of the original contract is available as a fall-back position. If the second contractor passes his source qualification testing, the fourth option is not exercised and it just disappears. The last option is a risk reduction tool to avoid procurement emergencies.

How is it innovative and creative?
The structure of the standard contract has allowed TA/AS to avoid sole source procurements. There is no need to maintain technical drawing packages. The ability of the proposing contractors to adapt the details of the black box to their manufacturing capabilities and available parts has reduced unit costs while eliminating the stream of parts substitution requests.

How has this new improvement been applied?
This improvement has been applied to recent award of three different contracts for locating beacons, IFF units, and tracking beacons in FY96.

What were the results and lessons learned in developing this improvement?
Unit costs have been reduced and the equipment has been updated to currently available electronic parts.

What other information would help another program evaluate its applicability towards their program?

This idea is applicable to any office that is responsible for the repetitive procurement of items. The idea is especially applicable to equipment that has limited maintenance performed on it. In the case of TA/AS, organizational and intermediate level maintenance is primarily only adjustments along with the removal and replacement of assemblies.

CONTRACTING – RFP DEVELOPMENT

Contracting – RFP Development

NAVAIR 301/342–9247 – phone
Dawson, Doug 301/342–9305 – fax
Helicopter Emergency Egress Device (HEED)
PMA–202
Naval Air Warfare Center
Patuxent River, MD 20670–1906

What program are you with?
Helicopter Emergency Egress Device (HEED) PMA–202 Aircrew Systems

What is the name of your new idea, approach, process innovation, or lesson learned?

1. Use of Bid Samples for technical evaluation. The Bid samples were provided free of charge to the Navy.
2. User involvement in the selection of a system.

Give a description of this idea and how it fits in the program:
Bid samples were evaluated for minimum performance requirements. Small contracts with production options were awarded to all contractors that met minimum requirements. An extensive Fleet Evaluation was conducted on the systems. The option was exercised on the user preferred systems.

How is it innovative and creative?
This was the first time the user had direct impact on the procurement of an Aviation Life Support System.

How has this new improvement been applied?
Option for production quantities of HEED has been awarded and systems are being delivered to the fleet.

What were the results and lessons learned in developing this improvement?
Early user involvement in the selection of a system will ensure satisfaction and reduce cost associated with engineering changes after a system is fielded.

What other information would help another program evaluate its applicability towards their program?
The Helicopter Emergency Egress Device (HEED) is a source of breathing air for use by aircrew in the event of an in-water crash. The current systems has been attributed with saving over 30 lives. Advances in technology have allowed for much improvements over the current systems such as smaller size, lighter weight, improved performance, and improved reliability. The HEED program team was tasked with evaluating NDI systems that would provide these improvements over the current systems.

The HEED team developed a unique acquisition approach. An RFP was issued which required the offeror to submit 6 bid samples at no cost to the government. The bid samples were evaluated for technical performance. Contracts for small quantities were awarded to all the systems meeting the minimum technical requirements. The Fleet was then given an opportunity to evaluate all the systems that met the minimum requirements. The user selected a system and a contract option was exercised for production quantities.

Contracting – RFP Development

NAVAIR 403/604–1414x8426 – phone
Sayger, LCDR Mark 703/604–1461/1445 – fax
Shallow Water Training Ranges SAYGERML.JFK@NAVAIR.NAVY.MIL
NAVAIR–2.5.1.1
Naval Air Systems Command
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5120

What program are you with?

Tactical Training Ranges, PMA–248
Naval Air Systems Command

What is the name of your new idea, approach, process innovation, or lesson learned?

Work Breakdown Structure based Proposals and Contract Baseline

Give a description of this idea and how it fits in the program:

Level 5 WBS is provided in the RFP as the format for the contractor to submit his technical and cost proposals and will be the basis for evaluation criteria and management of procurement Costs as an Independent Variable (CAIV).

How is it innovative and creative?

Level 5 WBS have not been issued as the integral part of the RFP Source Selection Process and tool to manage costs in a cost reimbursement environment. We know of no precedent for use of a defined WBS to establish an early working baseline at contract award. This early baseline promotes pre-award agreement among all working level members of the Government and Contractor IPT of who will do what, avoiding wasted effort getting started after award. It also allows immediate tracking of progress against a baseline. Linkage between proposal and post-award execution provides structure for IPT operations improving chances of first time success at predicted costs. The use of a detailed WBS infuses the engineering disciplines of base arrangement to the entire acquisition process from start to finish.

How has this new improvement been applied?

As a stepping stone to learning to use a Level 5 WBS for the proposal phase, a Level 3 WBS was provided as part of the Pacific Missile Range Facility Shallow Water Training Range (PMRF SWTR) which was awarded in Aug 96. A WBS is a hierarchical division of a product into appropriate components so that a large system can be broken down into manageable tasks. The Level 1 WBS would consist of the final product, range, and the total cost. Level 2 breaks down the final product, the range, into the major subsystems. The subsystems of a SWTR are the Ocean Sensor Subsystem (OSS), Shore Electronics Subsystem (SES), and the Display System (DS). The Level 3 WBS further breaks down the Subsystems into components. Proposals for the PMRF SWTR were received in the Level 3 WBS format. Technical and cost proposals were evaluated in a common format and costs for specific tasks and components could be easily compared between proposals. The WBS was used as the basis for building Government and Contractor IPT's and baselining contract costs. A Level 4 WBS breaks down each of the subsystem components into tasks of Design, Production and Test, and Installation. Level 5 breaks each of the tasks into specific costs of Material, Direct Labor, Indirect Labor, Travel, and Overhead.

A Level 5 WBS was provided as part of the Hawaiian Island Shallow Water Training Range (HI SWTR) RFP which was released on 16 Jan 97 with a due date of 27 Feb 97. A Level 5 WBS will be included in the East Coast Facility Shallow Water Training Range (EC SWTR) RFP.

What were the results and lessons learned in developing this improvement?

During the PMRF SWTR evaluation process, all proposals were submitted in the same format. This enabled a streamlined evaluation of offerors proposals through tracibilty between technical tasks and cost elements.

What other information would help another program evaluate its applicability towards their program?
The WBS based RFP is versatile and could be implemented in virtually any procurement action.

Contracting – RFP Development

NAVAIR 703/604–2540x4841 – phone
Wheeler, Mr. Glenn E. 703/604–2490 – fax
EA–6B ICAP III wheelerge.nimitz@navair.navy.mil
PMA–2343X
1421 Jefferson Davis Highway
Arlington, VA 22243–5120
What program are you with?
EA–6B IMPROVED CAPABILITY (ICAP III)

What is the name of your new idea, approach, process innovation, or lesson learned?
Preparation Of Government/Industry Pre-Solicitation Request For Proposal (RFP).

Give a description of this idea and how it fits in the program:
Through a series of requests for information and two-way communication, Government/Industry can arrive at a mutual understanding of available technology, costly acquisition processes, and overall program cost.

How is it innovative and creative?
This process helps to foster a teaming approach between Government/Industry by having each work toward preparing the most cost effective acquisition package which meets the Operational Requirement. Previously, the Government prepared a Draft RFP package without Industry's comments and released it without providing the cost portion of the Cost, Schedule and Performance Section. Industry was then requested to comment on the overall program. When program funding is limited, the old approach typically led to each group believing the program is on track, when in reality the requirements in the RFP package are unaffordable.

How has this new improvement been applied?
The ICAP III Program has released several requests for information, which has provided Cost, Schedule, and Performance Requirements. Additionally, three of four planned Government/Industry Exchange Sessions, have already taken place. This has allowed Government/Industry an opportunity to exchange information. The result is that Industry has a more thorough understanding of the problem and can, in turn, provide meaningful inputs during the early development and streamlining of the RFP.

What were the results and lessons learned in developing this improvement?
The process has provided valuable information to the Government about cost drivers, as well as affording the contractors an opportunity to provide innovative ideas and approaches early-on for development of meaningful RFP inputs. This is an improvement because contractors have, heretofore, been reluctant to share information. The time to plan and host the Government/Industry Exchange Sessions, answer questions and absorb inputs has also proved to be more than originally expected. A way to mitigate this is to provide a World Wide Web Page for quick dissemination of information to the contractors.

What other information would help another program evaluate its applicability towards their program?

If cost is considered as one of the biggest risk items, it is essential that Industry be involved at the earliest stage to allow the Government/Industry Team sufficient time to assess cost and prepare an RFP which meets the requirement.

CONTRACTING – SHIP DESIGN

Contracting – Ship Design

NAVSEA 703/607–2753 – phone
Asher, Richard 703/607–2757 – fax
SRDRS asher_richard_c@hq.navsea.navy.mil
SEA 00C

What program are you with?
Documentation is available at CVX program office (Heitman Bldg. Suite PL412).

What is the name of your new idea, approach, process innovation, or lesson learned?
Single Contract Procurement

Give a description of this idea and how it fits in the program:
Competitively award a single contract for design and fabrication of equipment.

How is it innovative and creative?
This approach will eliminate the opportunity or tendency for the fabrication contractor to blame the design contractor for problems.

How has this new improvement been applied?
We have not had the opportunity to apply this improvement but will do so at the next chance.

What were the results and lessons learned in developing this improvement?
N/A.

What other information would help another program evaluate its applicability towards their program?

CONTRACTING – SOURCE SELECTION

Contracting – Source Selection

NAVAIR 703/604–2119x3340 – phone
Macaluso, David 703/604–2968 – fax
Shallow Water Training Ranges MACALUSODP@AM@JFK.NAVAIR.NAVY.MIL
NAVAIR–2.5.1.1
Naval Air Systems Command
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5120

What program are you with?
Tactical Training Ranges, PMA–248
Naval Air Systems Command

What is the name of your new idea, approach, process innovation, or lesson learned?
Modified Four Step Source Selection Process.

Give a description of this idea and how it fits in the program:
Incorporate oral technical presentations to select an apparent successful offeror, then hold negotiations to document the system spec and finalize terms and conditions of the contract. Initial proposals are based on a Statement of Objectives and Technical Requirements Document. This process ensures efficient management of the procurement with Cost as an Independent Variable (CAIV).

How is it innovative and creative?
Modified Four Step Source Selection Process enables the offeror to present their proposals in an oral presentation environment with an interchange with Government personnel. It enables the Government personnel and contractor personnel to negotiate the final terms and conditions of the contract and develop an "A" Spec with an apparent successful offeror prior to award. This allows developing, prior to award, an engineering quality baseline (i.e what do we really intend to do) that is not possible to develop until post award using conventional methods. CAIV depends on having and tracking a good baseline. If one is not available prior to award, chances of success are reduced, sometimes greatly if the parties were not of common understanding of details.

How has this new improvement been applied?
The Modified Four Step Source Selection Process has been included in a competitive environment. The process was included in the Hawaiian Island Shallow Water Training Range (HI SWTR) RFP which was released on 16 Jan 97 with a due date of 27 Feb 97 and is planned for inclusion in the East Coast Facility Shallow Water Training Range (EC SWTR) RFP which is scheduled for release in early Feb 97.

What were the results and lessons learned in developing this improvement?
Process is currently being evaluated and will be competed in late April 1997.

What other information would help another program evaluate its applicability towards their program?
This innovation applies to any cost-type development contract where an engineering baseline is used to control and track progress of an IPT.

CONTRACTING – TEAMING

Contracting – Teaming

NAVSEA 703/607–2766 – phone
Galloway, Thomas 703/607–2757 – fax
Submarine Rescue Diving and Recompression System (SRDRS)
NAVSEA 00C31 GALLOWAY_THOMAS_R@HQ.NAVSEA.NAVY.MIL
2531 Jefferson Davis Highway
Arlington, VA 22202–5160

What program are you with?
Submarine Rescue Diving and Recompression System (SRDRS), ACAT IVT

What is the name of your new idea, approach, process innovation, or lesson learned?
Contracting Office Interface

Give a description of this idea and how it fits in the program:
Establish early and strong alliances between the Program Manager and the appropriate contracting office. Timely progression of a program into final design, prototype and production fabrication is significantly dependent upon the time it takes to prepare and issue a contract solicitation package. Contracting office understanding of acquisition reform initiatives is crucial to program success. The contracting office requirements in turn must be clearly addressed to the Program Manager to ensure they are included in the overall program strategy.

How is it innovative and creative?
Enhances program schedule and financial success by including a vital player that may often be overlooked in the early planning phases.

How has this new improvement been applied?
The Program Manager has been conducting ongoing dialogue with contracting specialists for assistance in preparations of draft solicitation package input, and to understand the best contracting approaches for meeting program requirements.

What were the results and lessons learned in developing this improvement?
A lesson learned is that the dialogue needs to begin in the earliest stages of program development. Additionally, minimizing the points of contact involved strengthens mutual understanding.

What other information would help another program evaluate its applicability towards their program?

Contracting – Teaming

SPAWAR 703/602–7469 – phone
Reinig, Mr. Mark 703/602–2027 – fax
CDF reinig@smtp–gw.spawar.navy.mil
SPAWAR PMW 163–3A

What program are you with?
Combat Direction Finding (CDF)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of a Cost/Pricing Integrated Product Team (CIPT) to expedite contract award.

Give a description of this idea and how it fits in the program:

The program used an Integrated Product Team composed of program office personnel, contracting office personnel and the prime contractor to develop the contractor proposal and reach agreement on cost quickly. These meetings were held at key points in the contractors proposal development process. As the contractor finished each section of the proposal, an IPT was held to discuss the bid rationale and answer any questions from the Government contracting team.

How is it innovative and creative?

The government and contractor worked together early in the process to establish the cost of the CDF systems under this production contract.

How has this new improvement been applied?

This improvement has been applied to other program within the program office with similar success.

What were the results and lessons learned in developing this improvement?

This process results in a dramatic reduction in the amount of time between RFP release and contract award. DCAA audit period was reduced from 90 days to 1 week. The Government proposal review time was cut in half.

What other information would help another program evaluate its applicability towards their program?

This process is effective in sole-source situations.

CONTRACTING – MILESTONE BILLING

Contracting – Milestone Billing

MARCOR 810/574–8361; DSN 786–8361 – phone
Miller, Thomas H.810/574–5472 – fax
Light Armored Vehicle Millerth@cc.tacom.army.mil
PM, LAV
US. Army Tank-automotive and Armaments command
ATTN: AMCPM–LAV–P
Warren, MI 48397–5000

What program are you with?

Light Armored Vehicles (PM, LAV, located at the U.S. Army Tank-automotive and Armaments Command, Warren, MI (TACOM)).

What is the name of your new idea, approach, process innovation, or lesson learned?

"Performance Based Payments on Firm-Fixed-Price Contracts"

Give a description of this idea and how it fits in the program:

The standard progress payment arrangement for FFP contracts is administratively intensive and expensive. The "Performance Based Payment" idea replaces progress payments with an incremental payment schedule based on successful completion of key contract milestones. The benefits of this approach are: savings in administrative costs and manpower, increased incentive for successful contract performance (they don't get paid unless the milestone event is successfully completed), and improved contractor cash flow (assuming satisfactory performance).

How is it innovative and creative?

Replaces the existing progress payment program with a program that reduces Government administration, while tying payment to performance, consistent with the best principles of Acquisition Reform.

How has this new improvement been applied?

The Light Armored Vehicle Air Defense (LAV–AD) program successfully implemented Performance Based Payments on their vehicle production contract. This was done through close teaming with the contractor and the DCMC office. All parties are satisfied that the new payment plan achieved its objectives – decreased Govt. admin cost and increased contractor accountability.

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

CONTRACTING – RFP DEVELOPMENT

Contracting – RFP Development

MARCOR 810/574–8361; DSN 786–8361 – phone
Miller, Thomas H.810/574–5472 – fax
Light Armored Vehicle Millerth@cc.tacom.army.mil
PM, LAV
US. Army Tank-automotive and Armaments Command
ATTN: AMCPM–LAV–P
Warren, MI 48397–5000

What program are you with?

Light Armored Vehicles (PM, LAV, located at the U.S. Army Tank-automotive and Armaments Command, Warren, MI (TACOM)).

What is the name of your new idea, approach, process innovation, or lesson learned?

"Templating" reviews and analysis.

Give a description of this idea and how it fits in the program:

"Templating" is a process developed by the Army Material Command (AMC), which involves a systematic, logical review of RFP/Contract requirements, with the purpose of ensuring that minimum essential requirements only are included. "Templating" derives its name from standard templates developed by AMC which identify standard, risk averse approaches for managing technical areas (engineering, logistics, production, etc.), and propose alternative approaches based on greater reliance on contractor management and reduced Government oversight. The main intent of the Template process is to critically review RFP/Contract requirements, to eliminate and/or tailor down requirements where possible, and to document rationale considered in the review process. Inherent in the Template process is conduct of risk analysis, to identify risk associated with requirements and to tailor the requirements accordingly. PM–LAV has implemented the Templating process as a part of our standard way of doing business.

How is it innovative and creative?

Conduct of templating forces our Integrated Product Teams to consider the "big picture" implications of levying contract requirements on the contractor, and look for ways to save cost while keeping risk within manageable levels.

How has this new improvement been applied?

There are several success stories associated with Templating. We have used templating to significantly reduce requirements and avoid cost on not only our new requirements (RFPs), but also on existing contracts. For example, the Saudi Arabian National Guard (SANG) LAV General Purpose Interface Assembly (GPIA) team reduced data item requirements from 60 to 13 through application of Templating techniques, resulting in a cost avoidance of $250,000.

What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Contracting – RFP Development

NAVAIR 703/602–7390 – phone
McLaughlin, Patrick M. 703/602–0593 – fax
Joint Strike Fighter Program Office McLaughlinP.jfk@NAVAIR.navy.mil

Contract
1745 Jefferson Davis Highway
Arlington, VA 22202

What program are you with?
Joint Strike Fighter Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Extensive Discussions and Debriefings under a Competitive Source Selection

Give a description of this idea and how it fits in the program:
Detailed discussions and reconciliation on cost, weight, and aero/performance with potential offerors, DCMC, and DCAA prior to RFP release to ensure that the Government requested only the pertinent information necessary to evaluate the critical evaluation standards. Government assessment of the initial proposal was provided during discussions including methodology and evaluation tools.

How is it innovative and creative?
Information provided was so extensive that Offerors understood Government rational for proposal requirements, Clarification Requests/Deficiency Reports, and award decision.

How has this new improvement been applied?
Provided Government evaluation and methodology during discussions and debriefings. Provided redacted Proposal Analysis Report and Source Selection Decision Memorandum to successful offerors.

What were the results and lessons learned in developing this improvement?
Led to complete understanding of issues by all of the parties involved in the source selection. No protest received.

What other information would help another program evaluate its applicability towards their program?
Should be applicable to any major selection.

COTS

COTS

SSP703/607–0561 – phone
Meserole, Marc 703/607–2233 – fax
TRIDENT SP201@ssp.navy.mil
SP 201
1931 Jefferson Davis Hwy.
Arlington, VA 22202–3518

What program are you with?

The TRIDENT Strategic Weapons System (SWS) program managed by Director, Strategic Systems Programs (SSP)

What is the name of your new idea, approach, process innovation, or lesson learned?

Reducing Life Cycle Support (LCS) Costs by Re-engineering with COTS

Give a description of this idea and how it fits in the program:

Strategic Systems Programs has total life cycle responsibility for the TRIDENT SWS. Because of this, SSP's technical branches and subsystem contractors are inherently incentivized to develop long term support strategies at the start of the program. They also are motivated to implement these strategies during development of the shipboard and flight subsystems that constitute the SWS. During operational deployment, the Government-industry team in each subsystem endeavors to maintain performance while achieving level annualized costs. Acting as an Integrated Product Team (IPT), the engineers, production professionals, logisticians and others perform portions of the engineering and manufacturing development process to design-in COTS assemblies in lieu of the original unique hardware and software configuration items. The IPT decisions account for all factors affecting performance, schedule and Life Cycle Costs (LCC). The experience gained by the team during the earlier program phases enhances the continuous systems engineering process this entails. Implementation is guided by well defined plans and an overall LCS strategy.

How is it innovative and creative?

SSP is able to execute this approach within its existing system as it is one of the few organizations within the Government or DoD to have cradle-to-grave responsibility for its systems. The well defined technical disciplines and systems engineering processes used during development are again used to evaluate available COTS technologies in light of the current level of system performance, any changes to system requirements, and potential effects on LCC. Developmental experience generally prevents the IPT from inadvertently considering a COTS component that is either too risky or too expensive to test thoroughly prior to incorporation. When the flexibility exists to trade operational support funds for the reengineering of the system with COTS components, the team can use COTS reengineering to insert the latest technology into the fleet and achieve equal performance at lower cost over the life cycle. The LCS focus is motivated by the continuing involvement of both the Government program office and contractor members of the team as it is clear to all that they must live with the decisions they make. Therefore, at the time of initial COTS introduction, plans for future downstream replacement of the COTS components are defined to assure proper LCS at lowest cost. Contractual incentives on bottom line parameters (performance, cost, and schedule) can further enhance the process.

How has this new improvement been applied?

This approach has been implemented successfully in the shipboard subsystems of the TRIDENT SWS. Several examples are:

a. The Trident navigation subsystem team developed a disk file server to replace a cartridge tape unit that was obsolete and extremely difficult and costly to maintain. Using 100% COTS modules and drives reduced the development time approximately 50% over the traditional approach. The navigation subsystem team used this initial experience to reengineer the navigation sonar system reducing the number of modules from 131 custom modules to 20 VME modules. They were able to maintain the performance of the system, simplify maintenance and support, and insert the latest technology into the fleet.
b. The fire control, navigation, and missile test and readiness interface was reengineered using a COTS VME subrack, a VME general purpose CPU and standard VME cards. The module count in the equipments involved was reduced from 1000 SEM modules to 10 VME modules. LCS became much simpler.
c. The missile monitor signal conditioner was designed to replace a SEM-based system having LED displays with VME and a COTS flat panel display. Display reliability was improved and the module count was reduced from 275 SEMS to 6 VME cards. The LCS advantage is again very apparent.

What were the results and lessons learned in developing this improvement?

The primary results were reduced LCS costs because of the reduction in the number of components in the system and the fact that the new COTS components are more supportable. Another result was the insertion of the latest technology into the fleet, so that the subsystems are more user friendly and are easier to maintain. The teams also gained valuable experience and knowledge to apply to further COTS reengineering efforts.

A key lesson learned is the need for a disciplined systems engineering process. It became apparent that COTS decisions require a firm understanding of interfaces, allocated requirements and alternative internal partitionings. This permits definition of alternatives that the entire IPT can then analyze in order to identify options that minimize LCC. The IPT repeats the approach used during engineering and manufacturing development but on a smaller scale and with application of the experience gained during that development. A second lesson is that life cycle support of subsystems using COTS components is fundamentally different from the traditional approach. COTS items generally are not amenable to long-term organic support, and the initial COTS decision must be accompanied by a specific support strategy that might include life-of-type buys or planned replacement in 5 or 7 years with a next generation COTS equipment. This approach applies because the market drives the technology requirements, and the military has little if any influence on the sources of the equipment. Because the design life of COTS components is very short compared to the life of the system, it is critical to design for supportability. The design must be flexible and the IPT must maintain a continuous awareness of the vendors involved, the market, and the direction technology is moving. The validity of the initial support strategy for each component must be continuously assessed as circumstances change.

What other information would help another program evaluate its applicability towards their program?

Introduction of COTS and downstream replacement of COTS components has a firm systems engineering foundation as its basis. This includes a well defined mission and clear operational requirements derived therefrom. It also includes documented and understood allocation of performance to the level where COTS is being considered as well as good interface definition at this level. Within this framework, COTS reengineering can be applied successfully. On the other hand, application is difficult, at best, if the foundation is not firm. The more members of the IPT who gained experience during development, the easier the framework is to achieve. The approach clearly requires teamwork between the Government and industry and benefits greatly if a relationship of mutual trust and respect already exists.

COTS

NAVAIR 703/604–3355x8165 – phone
Niemczyk, Rich 703/604–3770 – fax
Aircraft Launch and Recovery Equipment (ALRE) niemczykrs.ntrprs@navair.navy.mil
PMA251
Naval Air Systems Command
1421 Jefferson Davis Hwy.
Arlington, VA 22243

What program are you with?

The Long Range Line-Up System (LRLS)

What is the name of your new idea, approach, process innovation, or lesson learned?

The LRLS is a laser-based optical landing aid that displays centerline information to Navy/Marine Corps pilots during night aircraft carrier operations. The process innovation is the use of Commercial Off the Shelf (COTS) equipment to satisfy this requirement rather than developing a MIL–SPEC system. The lesson learned is that through this process innovation, the Navy was able to afford the COTS system where the MIL–SPEC system was significantly beyond the cost goals of the program.

Give a description of this idea and how it fits in the program:

The LRLS is a rather low level technology program that was ripe for COTS usage based on previous development completed by the Navy and by industry. The original Operational Requirements Document (ORD) written for the LRLS in 1995 contained considerable MIL–SPEC type boilerplate that precluded the application of a COTS system. This resulted in the issuance of a Request for Proposal (RFP) for a MIL–SPEC type system, the cost of which exceeded the OPNAV cost goals for the system. After a joint Navy/industry demonstration of a COTS system during a carriers deployment, the ORD was rewritten 1996 to take advantage of these lessons learned and accepted the performance of the deployed COTS system as the new requirement. Subsequently, the RFP was modified and a contract awarded to proceed with the LRLS program, well within the OPNAV cost goals.

How is it innovative and creative?

This is innovative and creative because we are applying non-traditional approaches to writing the ORD so that we don’t apply standard "boilerplate", but rather look at each facet of the requirement and insure that it is applicable to this system.

How has this new improvement been applied?

This new improvement was applied through the careful application of only those requirements that are necessary to meet the objectives of the system.

What were the results and lessons learned in developing this improvement?

The main result is that the Navy can afford to procure the LRLS under the COTS approach, where the MIL–SPEC type system was unaffordable. The lesson learned is to question all of the “boilerplate” requirements early in the formulation of the program so that the delays we experienced in restructuring the ORD and the procurement process can be avoided.

What other information would help another program evaluate its applicability towards their program?

The information that would help another program is to question any requirements that are stated as being "mandatory", when you believe that they are really "optional". By doing this early in the formulation of the program, costly requirements and potential delays can be avoided.

COTS

NAVSEA 703/602–8204x233 – phone
Wist, Edwin 703/602–2070 – fax
AN/UYQ–70(V) Advanced Display System (ADS) WIST_EDWIN@hq.navsea.navy.mil
SEA 91W5
2531 Jefferson Davis Highway
Arlington, VA 22242–5169

What program are you with?
AN/UYQ–70(V) Advanced Display System (ADS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Configuration Management

Give a description of this idea and how it fits in the program:
For Government Non-developmental Item (NDI) contracts, require the contractor to develop a Memorandum of Understanding (MOU) with the Commercial Off the Shelf (COTS) vendors, prior to the COTS item procurement. The intent is to inform the contractor, and the Government, in a timely manner, when the originally ordered COTS item is modified or is part of a production shut down by the Original Equipment Manufacturer (OEM) for the COTS item. The contractor should try to obtain an advanced development model of the COTS item for testing purposes in the application(s) it was originally intended. All the hardware/software/firmware interfaces must pass the contractor's test(s), including any Government Combat System tests. The contractor should recommend to the Government, to either "go" for a (contract) life-time buy of the original COTS item, or the new COTS item may be TOTALLY form, fit and functionally interchangeable (including supportability) with the original COTS item and requires no equipment hardware/software/firmware modification, or request some R,D,T&E funds to develop/fabricate/test some new technology for insertion into the Government's NDI equipment. These requirements must be in place early in the contract, i.e. not later than the start-up of the contractor's production line.

How is it innovative and creative?
It is innovative because it puts a proactive process in place, prior to equipment and spare part deliveries. It's creative by "almost" making the COTS vendor (OEM) an integral part of the contractor's Integrated Product Team.

How has this new improvement been applied?
Lockheed Martin Tactical Defense System, Eagan had experience with vendors changing their parts without reidentifying the part or even marking the item's part number on the hardware. The COTS vendor(s) identified these changes as "improvements" to their product, e.g. "faster" software/firmware, but made the COTS item incompatible with the original item in the application it was used.

What were the results and lessons learned in developing this improvement?
The results were surprising because over 90% of the COTS vendors signed a MOU with the Government contractor. "We" now expect to be notified, in a timely manner, before COTS changes occur giving the Government time to "select" the correct action(s).

What other information would help another program evaluate its applicability towards their program?
COTS vendor item identification by their part, model or catalog number or the technical descriptions on vendor catalog pages, data sheets, brochures and their performance specification is inadequate for (Government) life cycle configuration control of the item. Vendor technical descriptions change over time without the users knowledge and may even be deficient in specifying some undefined parameters. Therefore, it is strongly recommended that a Vendor Item Control Drawing (VICD) (per ASME Y14.100M or MIL–STD–100) be developed to define (and control) the

hardware/software/firmware interfaces of the COTS item. The VICD would be used to (re)procure IDENTICAL items and spares/repair parts. By reviewing the VICD, the OEM would determine that their item has changed from the last time it was procured ("by the drawing").

COTS

NAVSEA 703/602–0065x422 – phone
Dostie, Ronald J. 703/602–0012 – fax
Submarine Combat Systems: Rapid COTS Insertion Initiatives
NAVSEA PMS 425 Dostie_Ronald_J@HQ.NAVSEA.NAVY.MIL
NAVSEASYSCOM
PMS 425
NC3, 6E16
Arlington, VA

What program are you with?

NAVSEA PMS 425 manages numerous Submarine Combat Systems development programs for SSN 688/668I and TRIDENT submarine classes. We have two COTS based acquisition programs (ACATs III and IVT) that could be the subject(s) for acquisition information exchange forums.

What is the name of your new idea, approach, process innovation, or lesson learned?

This office has used the term "Rapid COTS Insertion" for initiatives underway that leverage significant amounts of COTS technology allowing for rapid integration of additional combat systems capability and maximizing use of NDI from other organizations.

Give a description of this idea and how it fits in the program:

Through this leveraged use of COTS and NDI for previously militarized systems/components, PMS 425 has been able to introduce capabilities to the fleet faster than previously planned. Recurring production costs have also been significantly reduced through the use of COTS and the elimination of many mil specs and standards

How is it innovative and creative?

Through various IPT structures involving several organizations, PMS 425 has restructured development programs to meet fleet needs much sooner than previously planned. The CCS MK2 Block 1A/B program is the first tactical combat system program on a submarine today that utilizes numerous COTS components and software (from several different organizations) operating on a FDDI (Fiber Optic) local area network. A similar program called Acoustic Rapid COTS Insertion (ARCI) also provides significant near term sonar system improvements by leveraging COTS/NDI products developed by other organizations. This system will be installed in late 1997.

How has this new improvement been applied?

The CCS Mk2 Block 1A/B program has been installed on two frontline SSN 688I submarines. The program is currently funded to produce and install a more capable version of this program (CCS MK2 Block 1C) on the entire SSN/SSN 688I inventory by FY05.

The first phase of the ARCI program will be installed on an SSN 688 class submarine by the end of 1997. The entire active SSN 688 and SSN 688I inventory is currently budgeted to get all three phases (each phase adding additional sonar capability) of this evolutionary upgrade program by the end of FY05.

What were the results and lessons learned in developing this improvement?

Use of COTS/NDI can truly be leveraged using open systems resulting in significant additional warfighting capability while reducing time for development, non-recurring and recurring costs. One of the bigger challenges is to help the operator understand, operate and maintain these new

products since they are so different in capability and complexity than what he has been previously exposed to.

What other information would help another program evaluate its applicability towards their program?
Numerous metrics can be provided which show how leveraging the use of COTS/NDI products is beneficial:

- DB gains for sonar acoustic performance
- overall processing gains in processing capability compared to previous legacy full mil systems (about 1000:1)
- system production unit costs compared to legacy systems (about 2:1)
- process changes that cut down procurement lead time and product installation planning lead time (reductions by several months)

COTS

NAVSEA 703/602–3143x157 – phone
Shaffer, Gordon 703/602–9407 – fax
NSSN C3I (Sonar, Combat Control, Architecture)
Shaffer_Gordon_Y@HQ.NAVSEA.NAVY.MIL
PMS401
2531 Jefferson Davis Highway
Arlington, VA

What program are you with?
PEO Submarine's NSSN Program.

What is the name of your new idea, approach, process innovation, or lesson learned?
TEAM SUBMARINE STRATEGY 2000 Commercial Off-The-Shelf (COTS) Primer

Give a description of this idea and how it fits in the program:
Acquisition Reform and subsequent changes in DOD policy have directed a preference for Commercial Off-The-Shelf (COTS) solutions to meet new acquisition program requirements. The NSSN C3I (Sonar, Combat Control, Architecture) system awarded in May 1996, is a complex combat system which is over 75% COTS-based.

The Navy's NSSN C3I Request For Proposal placed emphasis not only on functional performance requirements, but on supportability and affordability criteria as well. However, within the Navy acquisition and support communities, there yet persists many questions and concerns regarding the nature of COTS products and their ability to fulfill what used to be unique military specifications.

The application of a generic COTS selection process used by the C3I Prime Contractor (Lockheed Martin Federal Systems) as well as the incorporation of many other DOD documents, research papers, symposia briefs, peer reviews and program lessons-learned has provided the foundation for the recently released TEAM SUBMARINE STRATEGY 2000 COTS Acquisition Primer and its companion document COTS Acquisition Concepts & Considerations.

This presentation will examine the impacts to conventional Navy acquisition and life cycle support processes that occur as a result of COTS acquisition. It provides a high level before and after comparison of all acquisition phases and associated activities including life cycle support. Highlighted will be the differences in the planning, procurement, systems engineering and supportability engineering processes to ensure that the benefits of COTS are fully optimized. The

presentation concludes with a summary denoting the benefits of COTS and the need for process adaptation.

How is it innovative and creative?
The application of COTS equipments on the scale of a whole submarine combat system is unprecedented.

How has this new improvement been applied?
The COTS concepts and considerations discussed in this presentation reflect the "state of the practice" currently being applied by the Navy/LMFS Team.

What were the results and lessons learned in developing this improvement?

A. There are many ways to effectively deal with COTS-based systems i.e. there is no one solution applicable to all programs.

B. A generic COTS selection generic process, embedded up front in the systems engineering effort, is the most effective way to optimize program performance, supportability and affordability goals.

C. The use and support of COTS needs to be de-mystified to ensure the Navy acquisition and support communities recognize and fully embrace its benefits.

D. Programs with extensive COTS experience (e.g. IUSS, FDS) in military environments have indicated that COTS reliability exceeds predictions by a factor of two to five times.

What other information would help another program evaluate its applicability towards their program?
The intended purpose of these documents was to assist other programs in the understanding and managing of COTS risks and benefits as well as identifying generic processes for the successful acquisition and support of COTS-based systems.

COTS

NAVSEA 703/602–9079x201 – phone
Goodling, C. R. 703/602–2070 – fax
AN/UYQ–70(V) Goodling_C_Ronald@hq.navsea.navy.mil
SEA 91W5
Naval Sea Systems Command

What program are you with?
Navy Tactical Computers and Displays Division, SEA 91W5

What is the name of your new idea, approach, process innovation, or lesson learned?
Lessons Learned: COTS based programs require a new process for managing changes.
In the Mil Spec world, the Navy controlled if, when & how changes will be done. In the COTS world, we must recognize that the Navy does not dictate to industry when they will change a vendor product line. The Navy must adjust its program & thinking to reflect the rapid changing world of COTS for the Navy's acquisition & integration of its COTS based Computers & Displays Systems. The Navy must manage its programs based on Form, Fit & functional specifications and interfaces. Many of our customers are still expecting that the same level of "Control" that we had a few years ago in the Mil Spec World should follow into the new World of COTS.

Give a description of this idea and how it fits in the program:
We are using an IPT to examine & recommend how change the process should change. We are still several months away from the final solution.

How is it innovative and creative?
Solution TBD.

How has this new improvement been applied?
Still being established.

What were the results and lessons learned in developing this improvement?
TBD. The objective is a streamlined process that allows the Navy to successfully manage its program allowing the contractor the flexibility for providing innovated solutions & cost effective solutions.

What other information would help another program evaluate its applicability towards their program?
N/A

COTS

MARCOR 703/784–4507x2067 DSN: 278–4507x2067 –phone
Havrin, Mr. David703/784–4436 DSN: 278–4507 – fax
Assault Amphibious Vehicles havrind@mqg–smtp3.usmc.mil
PM for Combat Support Weapons
Commander, Marine Corps Systems Command (APM AAV)
2033 Barnett Avenue, Suite 315
Quantico, VA 22134–5010

What program are you with?
Assault Amphibious Vehicle

What is the name of your new idea, approach, process innovation, or lesson learned?
Fan Belt Change-out

Give a description of this idea and how it fits in the program:
Replaced current matched set of three belts that was part of the original design of the Assault Amphibious Vehicle (AAV) to a single off-the-shelf, commercially available molded single belt.

How is it innovative and creative?
This approach to finding a replacement for the belt was an attempt to change the usual procedures of continuing to pay increasingly higher costs for a part that was being phased out of general industry use and replace it with something, although not military specified, of fully acceptable use. The use of this new part has also resulted in better performance, easier supportability and reduced cost.

How has this new improvement been applied?
The Technical data Package was officially changed by use of an Engineering Change Proposal (ECP) to allow procurement of the replacement fan belt for future use.

What were the results and lessons learned in developing this improvement?
This approach has validated the wisdom of seeking non-developmental parts for an aging weapons systems which is faced with decreasing parts supplier base.

What other information would help another program evaluate its applicability towards their program?
Care should be taken to ensure that the commercial available replacement parts are completely adequate for use in the intended environment. Change for change sake is not recommended. An appropriate series of engineering analysis and selective testing is strongly suggested.

COTS

NAVSEA 703/602–8350 – phone
Hrin, Jim 703/602–2070 – fax
AN/UYQ–70 Display Program hrin_jim_g@hq.navsea.navy.mil
SEA91W5P4
2531 Jeff Davis Hwy.
Arlington, VA 22242

What program are you with?
AN/UYQ–70 Advanced Display Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Implementation of:
Open Systems Architecture (OSA) Design
Use of Commercial off-the-shelf (COTS) Computer Resources
Adaptation of commercial specifications and standards
Give a description of this idea and how it fits in the program:
The OSA design approach affords modular enhancement with new technology as customer operational requirements evolve. Under OSA, conventional COTS computer resources are used in lieu of the government designing proprietary products. COTS computer resources are designed to standard industry interface specifications. This yields an abundance of product offerings and lower acquisition cost as compared to the proprietary government tactical displays.

How is it innovative and creative?
Innovative approaches include:
Support from industry in defining the performance specification.
Use of commercial item descriptions in lieu of military specifications
Consolidated data requirements and use of tailored acquisition documents.
Use of COTS hardware and software.
Implementation of commercial product support processes.
Use of prototyping and decision tools.

How has this new improvement been applied?
This has been applied to the accomplishment of system design, assembly, and test of the AN/UYQ–70 display system in less that two years at a fraction of the development cost of the legacy tactical embedded computers and displays. The AN/UYQ–70 is designed around standard industry interfaces, and as such can be enhanced with emergent technology without requirement for any re-design of the operating system.

What were the results and lessons learned in developing this improvement?
Market research performed by the government yielded a finding that COTS/OSA computer resources could be acquired at a fraction of the cost of the legacy Navy tactical processors, with only minimal technical risk. Additionally, industry standard interfaces are adequate for addressing military applications. Acquisition and life cycle cost, product time to market, and post production support are addressed at favorable terms as compared to the legacy displays. Also, use of COTS/OSA does not inhibit the ability to address changing customer requirements.
What other information would help another program evaluate its applicability towards their program?
The Open Systems Approach is an ongoing process after the procurement contract is awarded. Industry is developing new products and discontinuing production of existing products. Combat weapons system program offices who are clients of the AN/UYQ–70 system evolve and refine their requirements to meet changing treats. The Program Office using the Open Systems Approach must be flexible and open to change.

COTS

SPAWAR 703/602–4433 – phone
Sherman, LCDR K. 703/602–5327 – fax
BGPHES ARS–ST shermank@smtp–gw.spawar.navy.mil
PMW 163–3B

What program are you with?
Battle Group Passive Horizon Extension System Acquisition Receiving Subsystem – Surface Terminal (BGPHES ARS–ST)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of Air Force-developed Government-Off-the-Shelf (GOTS) software and Commercial-Off-the-Shelf (COTS) hardware.

Give a description of this idea and how it fits in the program:
The approach was to reuse government-developed software and commercial hardware in the Navy's BGPHES ARS-ST. The prime contractor suggested the reuse of components of an Air Force program developed to meet a similar operational requirement for real-time ground connectivity with airborne reconnaissance assets. The USAF software was successfully rehosted into a smaller marinized Navy system, passed all operational testing, and will deploy onboard the USS Kennedy this April.

How is it innovative and creative?
The program reused over 400,000 lines of code (80% of the total) developed by another service for a fixed, ground-based system for use in a mobile shipboard environment. This approach allowed the Navy both to reuse existing code and to radically shorten the development cycle (and saved at least two more years of development time), thus ensuring deployment of current information technology capabilities.

How has this new improvement been applied?
The Air Force Tactical Ground Intercept Facility (TGIF) software was rehosted into the Navy's DTC-2/TAC-4 computers. Use of this concept allowed the Navy to redirect the previously-unsuccessful 13-year effort to develop a customized system. A more robust and capable system was developed which required only nine months to adapt for a successful demonstration and saved the taxpayers more than $13 million.

What were the results and lessons learned in developing this improvement?
The use of this code provided a proven solution for accurate communications between BGPHES ARS-ST, the data link, and aircraft receivers. This resulted in immediate joint service interoperability with the Air Force U-2 (three years ahead of schedule). Our future use of this code will ensure continued interoperability.

What other information would help another program evaluate its applicability towards their program?
A thorough market analysis should be conducted that includes GOTS and COTS to determine if systems developed by other government agencies can meet a program's requirements. Particularly promising candidates are those existing systems which satisfy common requirements or perform common functions (although in a maritime environment). This would be most useful in systems with open computing architecture designs.

Battle Group Passive Horizon Extension System, Surface Terminal (BGPHES–ST)
Background Information

Today, the name Battle Group Passive Horizon Extension System, Surface Terminal (BGPHES–ST) is synonymous with successful acquisition reform processes and innovation. This was not always the case, as the program had a long history of missed milestones and failure to perform. In November 1993, the program was redirected by the Program Manager (Space and Naval Warfare Systems Command, PMW–163). The Program Manager embarked on a daring initiative to cancel the existing program's direction and move off in a totally new and revolutionary manner. This resulted in a revised program that delivered the system to the fleet in less than nine months and has become the vanguard of the Information Warfare acquisition process. It epitomizes the type of program management which the Secretary of Defense Management Award recognizes.

The Battle Group Passive Horizon Extension System, Surface Terminal (BGPHES–ST) is a Command and Control Information Warfare System which gives operators on major afloat combatants the ability to monitor signals of interest far beyond the physical horizon. BGPHES–ST gives Navy operators the ability to remotely control the receivers onboard surveillance aircraft. All information is transferred between the operator and the airborne payload via a microwave link. The intercepted information is processed and disseminated to the rest of the Battle Group via the Joint Maritime Command Information System (JMCIS) Local Area Network. This provides the warfighter the most up to date information available in the Command and Control arena.

The Operational Requirements Document for the BGPHES–ST was signed on 17 September, 1981 and work has been ongoing to develop the system. Technical difficulties prevented the system from rapidly achieving success. In November 1993, the Program Manager redirected the program to make use of existing USAF software which was the core of the U–2 reconnaissance program's ground station. The USAF ground station performs a function similar to the one BGPHES–ST is intended to perform. This ground station software was translated to operate on standard Navy computers which exist on all major afloat combatants. The redirection of the program after 13 years of effort was an audacious and original decision that required dedicated leadership and strength of character to accomplish. Through constant supervision by a truly dedicated and professional team, the redirection yielded a fully functional system after only nine months of effort..

In September 1994, the BGPHES–ST was moved to the Land Based Test Site (LBTS) in Patuxent, MD. The system was rigorously tested utilizing an ES–3A airplane. Land Based testing was successfully completed with a recommendation for limited fleet introduction by Commander, Operational Test and Evaluation Force. The current BGPHES not only meets all Operational Requirement Document stipulations, but, it puts the Navy in the forefront of Joint Interoperability. Three Joint Interoperability exercises were successfully completed utilizing the USAF U–2 airplane. These exercises conclusively demonstrated that the BGPHES–ST could control and utilize the significant sensor resources aboard the U–2. This interoperability was achieved three years ahead of schedule and gives the Joint Force Commander a tremendous advantage in a conflict. Additionally, due to the enormous success of the program, the US Army Guardrail program has elected to emulate the Navy's acquisition process by developing through software reuse an interoperability segment for their ground stations. This will permit Guardrail ground stations to receive information from either the Navy ES–3 or the USAF U–2 thus adding even more flexibility and power to the Joint Commander's Information Warfare arsenal.

The system is currently installed on USS Kennedy (CV 67) and successfully completed OPEVAL on March 18, 1996 with both an ES–3A and a U–2. BGPHES–ST will give the carrier battle group a highly potent war fighting capability that it never had. This capability has been proven in War Games at the Naval War College to be truly decisive in the control of the Battle Space. No system has been so eagerly awaited by the Fleet.

BGPHES–ST completed its Milestone III acquisition decision on July 1, 1996 and received approval for full-rate production of 27 shipboard systems. The first production system will be installed aboard the

USS Theodore Roosevelt (CVN–71) in third quarter FY98 and after Follow-On Test and Evaluation (FOT&E) will reach Initial Operational Capability (IOC).

In addition, the reuse of Government Off the Shelf software and Commercial Off the Shelf hardware has saved the tax payer over $13 million. By utilizing common hardware and software, the Air Force and Navy can each build upon the other's developments to gain additional capabilities at little cost. The US Army will save a comparable amount as they move to achieve joint interoperability. Additionally, BGPHES–ST proves conclusively that the Services can work together to their mutual benefit without Congressional direction. This cooperation between Services is fostered by the BGPHES–ST management team in their dealings with the program management teams of the Air Force and Army. Finally, since the different Service programs have evolved into similar capabilities and hardware, BGPHES–ST is truly the bridge across the Joint Airborne reconnaissance community.

In conclusion, the BGPHES–ST team has taken a program on its last legs and turned it into the Navy's premier Airborne Reconnaissance system. The integrated product team has done this through superior management of all facets of the program and by breaking the paradigms of the acquisition process. It has lead the way in ingenious solutions to technical problems and has provided the fleet with a capability that is truly decisive in battle. It has been applauded as a leader in acquisition reform and been emulated by other services. Finally, the BGPHES–ST team has accomplish all this, while saving the tax payer a significant amount of money. This program management team is to be commended and is truly deserving of the Secretary of Defense Superior Management Award for 1996.

COTS

MARCOR 703/784–2006x2719 – phone
Castellvi, Maj Bob703/784–5842 – fax
USMC Predator SRAW Program castellvi4@mqg–smtp3.usmc.mil
CBG
2033 Barnett Ave., Suite 315
Quantico, VA 22134

What program are you with?
USMC Predator Short Range Anti-Armor Weapon (SRAW)

What is the name of your new idea, approach, process innovation, or lesson learned?
Aggressive Integration of Common Components

Give a description of this idea and how it fits in the program:

Predator emphasizes the use of proven technology and NDI components to reduce the technical risk and developmental costs. The Warhead and Target Detection Device (TDD) were adapted from the TOW2B missile design which saved the government an estimated $12 million in development costs. The soft-launch propulsion system and missile airframe were adapted from the Javelin program, formerly the AAWS–M medium anti-tank replacement.

How is it innovative and creative?

The standard process results in new design for most components of a system. Under the approach used by Predator, we bypassed much of the design and engineering effort which would otherwise be required.

How has this new improvement been applied?

During Dem/Val, the Predator entered a Risk-Reduction effort which took the entire weapon to a preliminary design status and focused on producibility. The result was a parts reduction from 1500+ in the Dem/Val missile to just under 300 in the tactical round.

What were the results and lessons learned in developing this improvement?

Use of existing missile components saved an estimated $8 million in development and allowed the program to reduce the EMD phase from 54 to 48 months, accelerating production by one year and saving an estimated $12 million in developmental costs.

What other information would help another program evaluate its applicability towards their program?
Information on program systems engineering processes and on missile components used is available from the program office.

COTS

MARCOR 703/784–4694x3002 – phone
Jakovich, USMC, Maj E. M. 703/784–3651 – fax
Defense Message System (DMS) jakoviche@mqg–smtp3.usmc.mil
2033 Barnett Ave., Suite 315
(PMIC–ICS)
Quantico, VA 22134–5010

What program are you with?
Defense Message System (DMS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Limited Rate Deployment (LRD)

Give a description of this idea and how it fits in the program:
This idea is a proposal to procure and field a limited quantity of COTS products in advance of the MAISRC III decision. LRD products to be purchased have been tested by the Joint Interoperability Test Center (JITC) and are certified "DMS compliant".

How is it innovative and creative?
Under the LRD concept, COTS products are purchased and fielded prior to IOT&E and MAISRC III (now tentatively scheduled for Sep '97). This will allow us to buy products with funds that might otherwise be unexecutable if we waited for the MAISRC III decision. Using an LRD also relieves some of the pressure on the current fielding schedule, that is, we can get started on fielding the DMS products that must be in place by the time AUTODIN is shut down in December 1999.

How has this new improvement been applied?
The other services are already conducting LRD of DMS products.

What were the results and lessons learned in developing this improvement?
The other services have bought and fielded some DMS products. Their customers are using DMS, gaining experience, and providing user feedback.

What other information would help another program evaluate its applicability towards their program?
This LRD concept may be applicable to other programs that purchase and field large quantities of COTS products to many customers according to a very compressed fielding schedule.

COTS

NAVAIR 703/602–7413x250 – phone
Keene, Kenneth 703/602–9181 – fax
Cooperative Engagement Capability Keene_Kenneth_D@hq.navsea.navy.mil
PEO(TAD)CB

2531 Jefferson Davis Highway
Arlington, VA 22242–5170

What program are you with?
PEO(TAD)C
Cooperative Engagement Capability

What is the name of your new idea, approach, process innovation, or lesson learned?
Streamline procurement of Commercial Off the Shelf (COTS) material for use on Government contracts.

Give a description of this idea and how it fits in the program:
Modify the Federal Acquisition Regulations to allow providing a lesser fee to the procurement of COTS material on Government contracts.

As we use more and more COTS in Navy systems, the risk the contractor assumes for development of circuit cards, sub assemblies, assemblies, and systems is substantially reduced by the percentage of COTS employed in the systems.

How is it innovative and creative?
It allows the contractor to retain the fair share amount of money on those items they develop, but reduces the amount of money they would receive for procurement of COTS material where no valve added is provided.

How has this new improvement been applied?
On the CEC program, the processor cards were changed from Contractor Furnished Equipment (CFE) to Government Furnished Equipment (GFE). This allowed the program to procure COTS material with minimal liability risk for the R&D phase and reduce overall cost to the program.

What were the results and lessons learned in developing this improvement?
This single initiative, on one COTS item resulted in a cost savings/avoidance for the CEC program of $2.5M. The long term savings to ensure minimal risk from this initiative should be achieved through changing the FAR clauses to reduce the burden that the Government must pay on COTS items procured by system integrators and any legal risk. Otherwise the government could be held liable if any delays in shipments occur regardless of the fact of whether or not any impact occurred.

What other information would help another program evaluate its applicability towards their program?

COTS

NAVSEA 703/602–6453x176 – phone
Ready, Tom 703/602–6480 – fax
SC–21 ready_tom@hq.navsea.navy.mil
PMS 400RX
2531 Jefferson Davis Highway
Arlington, VA 22242–5165

What program are you with?
SC–21 Program.

What is the name of your new idea, approach, process innovation, or lesson learned?
Non DoD Industrial Base Technology Insertion.

Give a description of this idea and how it fits in the program:

SC–21 is tentatively developing a plan with the Acquisition Center of Excellence to develop a process that will identify advanced commercial technology that could lower SC–21 cost and improve performance.

How is it innovative and creative?
Aggressively reaching out beyond the DoD infrastructure and industrial base to leverage commercial R &D.

How has this new improvement been applied?
In development.

What were the results and lessons learned in developing this improvement?
In development.

What other information would help another program evaluate its applicability towards their program?
Metrics are in development.

COTS

NAVAIR 703/604–1668x2113 – phone
Atterbury, Wynn 703/604–1730 – fax
QF–4 atterbur@lan–email.peocu.navy.mil
PMA–2081B
1235 Jefferson Davis Hwy.
CG1, Room 1101

What program are you with?
Full Scale Aerial Targets
What is the name of your new idea, approach, process innovation, or lesson learned?
Use of COTS in our avionics redesign effort.

Give a description of this idea and how it fits in the program:
We mandated the use of extensive off the shelf components in the redesign effort of the target avionics components.

How is it innovative and creative?
It follows the groundwork set forth in the Perry initiatives.

How has this new improvement been applied?
We are applying this approach in the current efforts.

What were the results and lessons learned in developing this improvement?
We anticipate that the unit cost of the avionics set will decrease from $90K/unit to at least $75K/unit.

What other information would help another program evaluate its applicability towards their program?
N/A.

COTS

NAVAIR 301/342–5601 – phone
Campbell, Luke 301/342–5812 – fax
E–2C Mission Computer Upgrade (MCU) "Campbell Luke"@PAX6@PAXMB1

PMA–231
NAWC–AD, Patuxent River
Patuxent River, MD

What program are you with?
PMA–231; E–2C Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Benefits of Commercial-Off-The-Shelf (COTS)

Give a description of this idea and how it fits in the program:
The E–2C program will be utilizing a repackaged DEC ALPHA commercial computer. It will be replacing a full-size "mil–spec" computer.

How is it innovative and creative?
The use of a repackaged DEC ALPHA commercial computer in a Naval aircraft would never have been envisioned 5 – 10 years ago. The program will also utilize a COTS operating system.

How has this new improvement been applied?
It is currently being implemented through the normal contracting process.

What were the results and lessons learned in developing this improvement?
The use of a COTS operating system does not optimize performance, but it does meet the requirements while reducing costs associated with software development and maintenance.

What other information would help another program evaluate its applicability towards their program?

COTS

NAVAIR 703/604–1002x3954 DSN: 327–1002x3954 – phone
Creasy, USN, Commander David W. 703/604–1278 – fax
JSIPS–N creasy@lan–email.peocu.navy.mil
PMA 281–1
Program Executive Officer
Cruise Missiles & Joint Unmanned Aerial Vehicles
1213 Jefferson Davis Highway
Arlington, VA 22246

What program are you with?
Joint Service Imagery Processing System – NAVY

What is the name of your new idea, approach, process innovation, or lesson learned?
Acquisition Streamlining, Joint Sourcing, Leveraged Savings, Cost as an Independent Variable

Give a description of this idea and how it fits in the program:
The fundamental premise of JSIPS–N was to build on the existing architecture provided by the original JSIPS program and modify where needed to meet Navy requirements. After reviewing the seven original JSIPS segments, it was determined that some segments were outright duplications of existing shipboard systems and others could be accomplished with only minor modifications to systems already installed and thus JSIPS–N was born.

JSIPS–N is a shipboard tactical digital imagery system with the capability to receive, process, exploit, store, and disseminate imagery and reports based on multi-source imagery from multiple inputs. The

system is being installed in shipboard intelligence and mission planning spaces onboard aircraft carriers (CV/CVN), amphibious assault ships (LHA/LHD), and Fleet Flagships, as well as at three shore sites. The National Input Segment (NIS) and Precision Targeting Workstation (PTW) of JSIPS–N will also be added to vans employed as unified CinC Rapid Deployment Suites (RDS) for the TOMAHAWK Afloat Planning System (APS). The system will provide highly accurate target coordinates, target offsets, and the latest available imagery to embarked Battle Force/Battle Group (BF/BG) staffs, tactical aircraft (TACAIR) strike planners, Special Operations Forces (SOF), and Marine forces afloat. System design is based on the integration and upgrade of functional capabilities in three primary components. These include the Digital Imagery Workstation Suite Afloat (DIWSA) which is a shared resource with the Afloat Planning System (APS), the Tactical Input Segment (TIS) which is a modification of one segment of the USAF lead JSIPS program and the NIS which is procured through the Defense Dissemination Program Office (DDPO). The DIWSA and PTW provide Softcopy Exploitation Segment (SES) functionality to enable targeting of Precision Guided Munitions (PGM). In addition, JSIPS–N will electronically interface with the Joint Maritime Command Information System (JMCIS), Joint Deployable Intelligence Support System (JDISS) and Common High Bandwidth Data Link Shipboard Terminal (CHBDL–ST). JSIPS–N is in full production and fleet installations are in progress.

How is it innovative and creative?

JSIPS–N is supported by several approaches and strategies. The first, adopted at the onset of the project in late 1990, was to mirror the acquisition strategy of the Afloat Planning System (APS) whenever possible. JSIPS–N uses the same hardware for the Digital Imagery Workstation Suite Afloat (DIWSA) and off-the-shelf (OTS) buys of tactical computers (TAC–3 and –4) as the APS program. As a result, these consolidated procurements have helped reduce the unit cost of DIWSA by half in the past 3 years while unit costs have declined with each succeeding TAC buy. JSIPS–N continues efforts to migrate to nondevelopmental commercial equipment to achieve decreased unit costs, common logistics support, and standardized training.

The Project is also heavily dependent on the U.S. Air Force for procurement of the National Input Segment (NIS) and the Tactical Input Segment (TIS). The TIS is in initial production with first delivery due early next year. Although there have been small hardware and O&S cost reductions to date, we are continually working with the Air Force to lower overall support costs.

How has this new improvement been applied?

Emphasis on cost, common hardware, and adopting innovations from other projects has also enhanced our ability to adjust project requirements by taking advantage of technology improvements. We have leveraged cost reductions by reinvesting the savings into follow-on components in two areas, thus far. First, we are improving NIS capabilities with the Imagery Exploitation Support Segment (IESS). Second, we have incorporated Precision Targeting Workstations (PTW), supporting the Strike Planning Archive (SPA), into the system architecture. The use of increasingly powerful nondevelopmental computers will significantly reduce the time required to prepare mission planning products. Finally, we have continually involved fleet operators in the development process to assist in making requirements and cost tradeoffs. This has produced a number of successes and resulted in changes to several requirements. A recent success has been the use of commercial logistics support for both JSIPS–N and APS. The process was originated by PMA–281 in a teaming arrangement with the Defense Logistics Agency and Federal Express and successfully employed during two recent CVN deployments.

What were the results and lessons learned in developing this improvement?

The primary result has been the fielding of a highly capable system which is absolutely vital to the support of PGMs. These weapons allow U.S. forces to engage targets with minimal risk to the delivering unit and maximize the effectiveness of each sortie launched. The essential lesson is to build systems with a minimum of basic development by utilizing off-the-shelf and nondevelopmental

components to the fullest extent. JSIPS–N successes to date have also been dependent on insightful input from intended users.

What other information would help another program evaluate its applicability towards their program?
Programs should continually search for improved business methods when acquiring and supporting new systems and modifications. Emphasis must be placed on OTS/NDI whenever possible. The JSIPS–N project manager can provide advice to other programs in achieving similar objectives.

COTS

NAVSEA 703/602–9032 – phone
Cummins, Randall703/602–5847 – fax
MK25 Mod 1 MOM–MAGNETIC UB/MK25 MOD2 UBA ENHANCEMENT KIT
PMS340 CUMMINGS_RANDALL_S@HQ.NAVSEA.NAVY.MIL
AP2/Rm. 2010
2611 Jefferson Davis Highway
Arlington, VA 22242–5160

What program are you with?
Special Warfare Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Maximize Technology

Give a description of this idea and how it fits in the program:
Development/procurement of new systems should maximize applications/ technologies to existing systems.

How is it innovative and creative?

How has this new improvement been applied?
Improved components tested and procured within the MK 25 Mod 1 UBA program are subsequently being procured for retrofit to the existing MK 25 UBA.

What were the results and lessons learned in developing this improvement?
As a result , no additional engineering or testing costs were incurred.

What other information would help another program evaluate its applicability towards their program?

COTS

NAVSEA 703/602–3143x110 – phone
Hansen, Mr. Lynn 703/602–2172 – fax
NSSN C^3I (Sonar, Combat Control, and Architecture subsystems)
PMS401 Hanson_Lynn_L@HQ.NAVSEA.NAVY.MIL
PEO SUBS/PMS401
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?
New Attack Submarine (NSSN) Command, Control, Communications, and Intelligence (C^3I)
What is the name of your new idea, approach, process innovation, or lesson learned?
Design-To-Affordability (DTA)

Give a description of this idea and how it fits in the program:
DTA focuses design efforts on Life Cycle Costs where the development cost is a very small portion of the total life cycle cost.

How is it innovative and creative?
* Structured to benefit from COTS and Open Systems
* Maximum R&D funding profile provided in RFP for first five years so that competitively awarded contract would be executable within the budget cycle.
  * Contractor responsible for technical refresh of limited production systems at Post Shakedown Availability
  * Technical refresh update profile (every six years) specified for competitive proposal evaluation
* DTA development award fee based on meeting production goals for follow-on systems
  * Fixed price production options for the first four shipsets provide near term incentives

How has this new improvement been applied?
* DTA applied to NSSN C3I program.
* Goals established for spares and repairs and for follow-on production

What were the results and lessons learned in developing this improvement?
  * COTS and Open Systems significantly reduced development and production costs over MILSPEC
  * The gains in performance/cost reduction for COTS encourages delaying component purchases to latest date.

What other information would help another program evaluate its applicability towards their program?

COTS

PEO–SCS703/602–4335 – phone
O'Connell, CAPT John 703/602–7648 – fax
Advanced Tactical Data Link Systems Capt_John_O'Connell@smtp–gw.spawar.navy.mil
PMW 159
Program Executive Officer, Space, Communications
and Sensors
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
PEO SPACOMMSENS, Advance Tactical Data Link Systems (PMW 159)
What is the name of your new idea, approach, process innovation, or lesson learned?
CDLMS Program based on COTS/Open Systems Architecture.

Give a description of this idea and how it fits in the program:
The CDLMS (Common Data Link Management System) Program is exploiting commercial off-the-shelf products and existing C2P (Command and Control Processor) software to provide a smaller and lower cost Link–16 product for the Navy. This combination of COTS hardware and Navy software

will make Link–16 capabilities more affordable and easier to integrate and operate on smaller platforms.

How is it innovative and creative?
Commercial VME (versa module european) components (VME cards, chassis, and display/workstations) are procured off a GSA Schedule at competitive prices. Existing software modules in CMS–2, ADA, and C++ provide the unique Link–16 operational functions that are then integrated into a cohesive system by Navy developers based on an open system architecture.

How has this new improvement been applied?
Link–16 functions can now be hosted in a COTS platform (TAC–X/Q–70) and provide a more affordable and flexible package for the fleet.

What were the results and lessons learned in developing this improvement?
COTS provides low cost products with relatively short production leadtimes. However operating systems are upgraded at least every six months and can make system integration difficult for software developers. Navy contracts for TAC–X/Q–70 platforms must keep pace with the commercial market.

What other information would help another program evaluate its applicability towards their program?
The maturity and unique functionality of a particular program must be consider carefully before aggressively pursuing a COTS/Open Systems Architecture. The commercial market is rapidly changing and commercial specifications will not necessarily handle every application. A particular program may not save enough on the recurring COTS procurement costs to offset the initial system integration costs or effectively manage the cost of keeping pace with software upgrades in the commercial market.

COTS

NAVSEA 703/602–6453–176 – phone
Ready, Tom 703/602–6480 – fax
SC–21 ready_tom@hq.navsea.navy.mil
PMS 400 RX
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5165

What program are you with?
SC–21 Program.

What is the name of your new idea, approach, process innovation, or lesson learned?
Non DoD Industrial Base Technology Insertion.

Give a description of this idea and how it fits in the program:
SC–21 is tentatively developing a plan with the Acquisition Center of Excellence to develop a process that will identify advanced commercial technology that could lower SC–21 cost and improve performance.

How is it innovative and creative?
Aggressively reaching out beyond the DoD infrastructure and industrial base to leverage commercial R &D.

How has this new improvement been applied?
In development.

What were the results and lessons learned in developing this improvement?
In development.

What other information would help another program evaluate its applicability towards their program?
Metrics are in development.

COTS

SPAWAR703/602–9549 DSN: 332–9549 – phone
Wang, Mr. Gary 703/602–5327 – fax
Naval Electronic Combat Surveillance Systems (NECSS)
PMW 163–2 WANGG@SMTP–GW.SPAWAR.NAVY.MIL
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
Ships Signal Exploitation Equipment (SSEE)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of an evolutionary acquisition strategy relying on the use of commercial and government off-the-shelf (COTS/GOTS), non-developmental item (NDI) hardware and software.

Give a description of this idea and how it fits in the program:
An evolutionary acquisition strategy, using a modular, distributed architecture and an Open Systems Environment (OSE) is being used in an effort to achieve commonality among systems and the flexibility required to deal with emergent threat SOIs. Rapid advances in technology, accessible to virtually any potential adversary, have outstripped the traditional "design to a fixed requirement" strategy. System acquisition and integration is performed by NISE East Charleston, with all required material obtained using existing contracts. Thus eliminating the requirement for a prime hardware contract.

How is it innovative and creative?
The use of COTS/GOTS/NDI hardware and software is innovative and creative because incremental upgrades to hardware can be integrated, tested and fielded in a shorter time than traditional development efforts. The system can evolve and adapt quickly in order to exploit new threat emergent technology thus allowing the Navy to take full advantage of state-of-the-art technology being used in the commercial market. The use of GOTS/COTS hardware common with other systems also allows more economical procurement of hardware and spares. SPAWAR can exert greater control over the development and system costs by using a field activity as the integration agent.

How has this new improvement been applied?
This approach has accelerated testing and deployment of SSEE system improvements and increased shipboard cryptologic capabilities. Since 16 March 95, when SPAWAR 00 granted full production of SSEE Phase 2 Increment B hardware, over 35 systems have been procured and installed on surface combatants and at shore sites. SSEE is using the same hardware and software as Cryptologic Carry-on Program's Advanced Cryptologic Carry-on Exploitation System (ACCES), and some common hardware and software with PRIVATEER, a SOCOM program. For example, SSEE is using the same Spectrum Analyzer, Radio Frequency Management System (RFMS) hardware as PRIVATEER. In addition, SSEE is using PRIVATEER's Local Monitoring System (LMS) and PRIVATEER will use SSEE's Core Digital Signal Processing (CDSP) software.

What were the results and lessons learned in developing this improvement?

SSEE has achieved positive results in the last three years based on the number of systems fielded. The use of COTS/GOTS/NDI hardware presents challenges to the traditional configuration management practices and support structure. For example, vendors for laptop computers being installed on SSEE platforms are continuously replacing current models with new systems that must be tested each time to ensure they work with existing software. In addition, the government is relying more on commercial manuals for guidance on troubleshooting and operating procedures.

What other information would help another program evaluate its applicability towards their program?

The SSEE approach to the use of an evolutionary acquisition strategy relying on COTS/GOTS/NDI is beneficial to other programs that strive to keep abreast with current technology and provide this capability to the fleet expediently.

COTS – SPARING

COTS – Sparing

NAVSEA 703/602–0647 DSN 332–0647 – phone
Gaskill, Gerald GASKILL_JERRY@HQ.NAVSEA.NAVY.MIL
Battle Force Tactical Training (BFTT)
PMS 430

What program are you with?
PMS 430 BFTT

What is the name of your new idea, approach, process innovation, or lesson learned?
BFTT Spares Project

Give a description of this idea and how it fits in the program:
BFTT has developed a shore based spares kit which eliminates the need for shipboard spares.

How is it innovative and creative?
BFTT uses reliability and failure analysis from a large industry usage pool to determine what spares are needed. The spares have been identified and assembled into a kit which is centrally located on each coast. Individual ships no longer need to carry spares to support an inport training system. Should the BFTT system have an equipment malfunction, technical support and parts support are directed simultaneously to correct the problem. The costs or spares are reduced by drawing from a centrally located spares kit. Equipment downtime is minimized because technical support is available to accompany the parts if needed.

How has this new improvement been applied?
This is the approved sparing philosophy for BFTT.

What were the results and lessons learned in developing this improvement?
COTS based systems often have large data bases available to support RM&A analysis, which can be used effectively to determine spares usage. With the rapidly changing technology, a strategy for technology updates which upgrades computers was needed. The number of spares which became obsolete as computers are updated and replaced is minimized.

What other information would help another program evaluate its applicability towards their program?
The BFTT system is COTS based. Other programs should ensure that they have sized their spares to a strategy for introducing new technology into their system design.

COTS – TEAMING

COTS – Teaming

NAVAIR 703/604–0885x3621 – phone
Wood, Stephanie 703/604–1307 – fax
Pioneer UAV wood@lan–email.peocu.navy.mil
PMA–263D5A
1213 Jefferson Davis Hw.
Arlington, VA 22246

What program are you with?
Pioneer Unmanned Aerial Vehicles, PMA–263

What is the name of your new idea, approach, process innovation, or lesson learned?
Pioneer New Sensor Payload Procurement

Give a description of this idea and how it fits in the program:
The Pioneer Air Vehicle has a TV and a FLIR sensor payload which is used for surveillance. The video signal from this payload is radioed back to the Pioneer Ground Control Station where it can be exploited. The current payloads are leading system readiness degraders and are expensive to repair. The New Sensor Payload provides a replacement payload.

How is it innovative and creative?
The creative aspect of this program is that it combines a Commercial-off-the-Shelf (COTS) approach with a method of having the Prime contractor conduct a competitive procurement with the government retaining final consent.

How has this new improvement been applied?
While neither of the procurement techniques described above is original, this combination provided a streamlined approach for Pioneer. The Pioneer program used COTS and Contractor managed competition as the basis for the acquisition approach for replacing the Pioneer payload.

What were the results and lessons learned in developing this improvement?
The results were that the Pioneer program is ready to award the contract for the New Sensor Payload procurement five months after release of the RFP. This five months includes completion of the competition to select the subcontractor who will build the payload as well as the prime's proposal submittal, evaluation and negotiation.

Lessons learned include:

- completion of a market survey prior to using COTS
- close coordination required with prime to ensure competition works
- performance spec allowed industry to easily meet our cost and schedule goals

What other information would help another program evaluate its applicability towards their program?
The key to this program was that the maturity of TV and FLIR sensor packages is very high, so COTS was able to meet our requirements. The schedule payoff for us was having our prime perform the competition. The retained consent provision allowed the government to keep proper oversight on the competition outcome without hampering the prime's efforts. This was a win-win situation for the prime and the government, and resulted in a very streamlined approach that still provided for competition in the process. What's critical is that the data rights situation on the Pioneer program dictates that our current prime will normally have to be the integrator for all upgrades. Given that as a starting point, having them run the competition provided for a quicker competition.

DELEGATION OF AUTHORITY

Delegation of Authority

NAVSEA 703/607–2766 – phone
Galloway, Thomas 703/607–2757 – fax
Submarine Rescue Diving and Recompression System (SRDRS)
NAVSEA 00C31 GALLOWAY_THOMAS_R@HQ.NAVSEA.NAVY.MIL
2531 Jefferson Davis Highway
Arlington, VA 22202–5160

What program are you with?
Submarine Rescue Diving and Recompression System (SRDRS), ACAT IVT

What is the name of your new idea, approach, process innovation, or lesson learned?
Milestone Decision Authority (MDA) Delegation

Give a description of this idea and how it fits in the program:
Make use of the ability to designate the MDA at a level appropriate to the scale of the program. The interface of the Program Manager and the MDA is crucial to program management success. Delegation of MDA authority to a lower level facilitates interaction and promotes understanding of program requirements, progress, and any necessary modifications.

How is it innovative and creative?
This observation is more of an affirmation of the policy, and a lesson learned on this program.

How has this new improvement been applied?
MDA delegation was performed at Milestone 0. A subsequent delegation to another level is under review.

What were the results and lessons learned in developing this improvement?
Improved turn around time for information exchange and program documentation for review and approval.

What other information would help another program evaluate its applicability towards their program?

DEPOT MAINTENANCE

Depot Maintenance

NAVAIR 703/604–2480x4770 – phone
Beard, Mrs. Cheryl – fax
H53 and Executive Transport Helicopters Beardca.jfk@navair.navy.mil
PMA–261C
1421 Jefferson Davis Highwy
Arlington, VA 22243

What program are you with?
PEO(A)/PMA–261 H53 and Executive Transport Helicopter Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Proposal for innovative CH–53E commercial SDLM procurement

Give a description of this idea and how it fits in the program:
In response to a request from the Office of Federal Procurement Policy for acquisition innovation test cases, we have proposed to use innovative competitive procurement practices to prepare and award commercial Standard Depot Level Maintenance (SDLM) contracts for the CH–53E helicopter.

How is it innovative and creative?
Standard Depot Level Maintenance (SDLM) is funded by an O&MN appropriation and provides for a comprehensive inspection and maintenance of aircraft that have come to the end of service period. An inspection that is designed to assess the overall material condition of the aircraft is performed at the end of the service period to determine if it's condition warrants a service period extension of twelve months. This inspection is known as the Aircraft Service Period Adjustment (ASPA). Aircraft which fail the ASPA inspection are inducted into SDLM if both funding and industrial capacity are available. When inducted, aircraft are disassembled, paint is removed and designated aircraft structural zones and specific components are inspected using various non-destructive inspection techniques. Discrepancies are noted and repaired, corrosion is removed and the aircraft is painted, assembled and tested before being returned to the fleet.

Historically, OPNAV has considered a backlog of 100 aircraft (combined Naval Aviation total) acceptable and not an impact to fleet readiness. The FY–97 requirement for Naval Aviation SDLMs is 445 aircraft. Currently 244 are funded which is expected to result in an end-of-year backlog of 201 aircraft. 27 CH–53E helicopters are part of this excessive backlog. The assigned organic depot does not have the industrial plant capacity to induct any of these 27 CH–53E helicopters.

Due to the lack of capacity at our depot and the potential adverse impact to fleet operational readiness and availability that the CH–53E SDLM backlog presents, we have proposed to establish qualified commercial sources capable of providing SDLM expeditiously once funding becomes available. For several reasons, conventional procurement procedures are poorly suited to the award of contracts for commercial SDLM. First, the pace of SDLM inductions precludes effective use of OM&N funds for competitively awarded SDLM contracts. The Navy obtains funds for commercial SDLM either through advance budgeting and approval or following mid-year budget reviews. OM&N funding, which the Navy must use to pay for SDLM, is available for obligation only during the fiscal year in which it is appropriated. In order to obligate all available OM&N funds prior to the end of the fiscal year, the Navy must induct aircraft for SDLM into the contractor's facility by the end of the fiscal year. All aircraft for induction are provided by operational forces, and these inductions must be level-scheduled to avoid adverse operational impacts. An ideal schedule would require the induction of two or three aircraft per month over a period of six months. If we tried to develop an acquisition strategy in accordance with the requirement of full and open competition, we would not have sufficient time to

conduct a source selection, including a detailed technical review and site survey, and to achieve a level-schedule induction of aircraft after funds became available at mid-year. Second, if commercial sources are to supplement the depot's SDLM work on an extended basis (to reduce organic depot SDLM backlog), comprehensive annual competitions will not be cost effective and may impractical given time constraints. This would hold true for funds either received at the beginning of the year due to advance planning or received as a result of mid-year reviews. Consequently, the test proposed below is necessary to ensure the efficient procurement of commercial SDLM.

PROPOSED INNOVATIVE APPROACH:

We propose to conduct a Two-Step Source Selection. The first step would comply with existing statutes and regulations regarding two-step sealed bidding (see FAR 14.503), and would include the solicitation and evaluation of technical proposals. Each offeror would be expected to submit a technical proposal, based on the CH–53E SDLM performance specification, that provided sufficient detail for the Navy to evaluate its technical acceptability. Upon completion of site surveys and discussions with the offerors, the Navy would generate a "Qualified Bidder's List." In addition, the Navy would develop a standard contract format. The contract type would be firm, fixed-price, with two option years.

The second step would begin upon notification by NAVCOMPT that funds were available. The Navy would release an Invitation For Bid (IFB) to the previously qualified bidders, and would award the contract to the low, responsive bidder.

The proposed innovation is as follows:

We propose that the Qualified Bidders List be in effect for a six-year period. Any competition held while the Qualified Bidders List remained effective would be limited to those commercial sources on the list. At two annual intervals following award of the initial contract, the Navy would decide whether to exercise each option with the winning contractor or reissue the IFB. If the Navy were to reissue the IFB at any point during the three years following award of the initial contract, all of the qualified bidders on the established bidder's list would be eligible to compete, and the low, responsive bidder would receive the award. The contracting officer would determine upon reissuance of the IFB, whether the subsequent contract award would contain options and if so, how many. If instead, the Navy were to exercise both options following the initial contract award, the Navy would conduct another competitive procurement for commercial SDLM after completion of the two option years. That competition would incorporate an abbreviated, two-step process. During the first step, each previously qualified bidder would have an opportunity to update their technical proposal, and the Navy would conduct a significantly shortened and efficient technical evaluation of the updated information. During the second step, the newly qualified bidders would submit sealed bids, and the Navy would award the contract to the low, responsive bidder.

The Navy would have the authority to disqualify any of the bidders for cause at any time while the Qualified Bidders List remained effective.

If, at any time, the requirements for SDLM were to increase, the Navy would follow the second step in the procedure described above. The Navy would issue an IFB to the qualified bidders, and award an additional contract to the low, responsive bidder.

If, at any time, the low bidder or contractor were to demonstrate insufficient capacity to fulfill all of the Government's SDLM requirements for that year, the Navy would award a second contract to the next-lowest, responsive bidder from the most recent IFB.

By maintaining the Qualified Bidders List for a six-year period, the Navy would 1) eliminate the need to conduct continuous and burdensome source selections; 2) preserve competition; and 3) reduce cost

and technical risk to the Government by declining to commit to a multi-year contract with one commercial source. The prospect of options would provide an incentive for the initial contractor to perform capably. The Navy's strategy also would allow the agency to solicit bids quickly, in the event that the contractor were to perform unsatisfactorily or the requirements were to increase.

How has this new improvement been applied?

Our proposal to establish a qualified bidder's list, to remain in effect for 6 years, and to waive the requirements for Full and Open Competition is currently under review in the Office of Federal Procurement Policy. We have begun all steps necessary to conduct a Source Selection in the third/fourth quarter of FY97 and remain hopeful that at the conclusion of this Source Selection we will be given permission to establish the proposed Qualified Bidder's List.

What were the results and lessons learned in developing this improvement?

We have not yet been granted permission to implement this improvement.

What other information would help another program evaluate its applicability towards their program?

We believe that this proposal reconciles the need to award SDLM contracts swiftly with the need to promote competition. As stated above, it will permit the Navy to solicit bids quickly to maximize the amount of time available for induction or in the event that the contractor were to perform unsatisfactorily. If the Navy's backlog of SDLM were to increase suddenly, the strategy also would position us to award an additional contract efficiently, notwithstanding constraints upon the use of OM&N funds.

We proposed to perform as a test case not only to meet the requirements of the CH–53E program, but also to determine whether the proposed procedures would be valuable in the administration of the many other aviation programs that currently confront a substantial backlog of SDLM.

Depot Maintenance

NAVAIR 703/604–3730x5124 – phone
Moore, CDR R. 703/604–3330 – fax
E–2C Integrated Maintenance Concept MOORERD@AM@JFK
AIR–3.1
AIR–3.1
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?

PMA–231; E–2C Program

What is the name of your new idea, approach, process innovation, or lesson learned?

Ways to reduce Life Cycle Costs

Give a description of this idea and how it fits in the program:

The Phased Depot Maintenance concept is to perform overhaul maintenance on major components of the aircraft when it is required in such a way that allows a level work loading of the depot facility and reduces the time required for depot overhaul. There are eight "super components" which will be overhauled and placed in a pool – wings, rotodome, tail, fuselage, nacelle, and pylon. Aircraft after arriving at the depot would have the super components swapped and other work performed on the fuselage component and returned to the fleet in substantially less time than the current SDLM.

How is it innovative and creative?

The PDM is a revolutionary way to perform depot level overhaul on the E–2. Traditionally, the entire aircraft undergoes depot maintenance regardless of the condition of the major components of the

aircraft. Using RMC data, the super components will be overhauled as required and replaced on an aircraft when it goes through the depot. PDM also allows for a more smooth loading of the depot as components can be worked on when the fuselage is not available for maintenance.

How has this new improvement been applied?

The specs for PDM are being developed now with the prototype aircraft to be inducted April 97 to validate the specs and concept.

What were the results and lessons learned in developing this improvement?

Significant amounts of money will be saved once this concept is in place.

What other information would help another program evaluate its applicability towards their program?

DIMINISHING MANUFACTURING SOURCES

Diminishing Manufacturing Sources

NAVSEA 703/602–9079x201 – phone
Goodling, C. R. 703/602–2070 – fax
AN/UYK–43(V) Goodling_C_Ronald@hq.navsea.navy.mil
SEA 91W5
Naval Sea Systems Command

What program are you with?
Navy tactical computers and displays division

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson learned: Provide adequate resources for DMS in the POM process

Give a description of this idea and how it fits in the program:
On a multiple year requirements or IDIQ production contract with multiple orderable items ensure that funding is adequately identified to handle the diminishing manufacturing source (DMS) problem. In order to maintain manufacturing, depot repair and logistic supportability, funding must be provided well in advance to provide for these.

How is it innovative and creative?
Nothing innovative, it just saves time and money in the long-run.

How has this new improvement been applied?
Funding has been allocated in the POM process to allow for some DMS issues to be covered.

What were the results and lessons learned in developing this improvement?
The lesson learned through implementation of a second source program was that much time and money was expended to develop a second source and in the long run that source does not have adequate expertise to go back and do redesign when diminishing manufacturing sources require it. A manufacturing house alone is insufficient to handle the complexities of the design and in a downsizing environment this becomes extremely important.

What other information would help another program evaluate its applicability towards their program?
N/A

EARNED VALUE

Earned Value

NAVAIR 703/604–2446x8519 – phone
Pisano, CDR Nicholas 703/604–2886 – fax
PEO(A) PISANO.ND.NTRPRS@NAVAIR.NAVY.MIL
DPEO(A)–BFM/IRM

What program are you with?
PEO(A)

What is the name of your new idea, approach, process innovation, or lesson learned?
Technical Performance Management (TPM)

Give a description of this idea and how it fits in the program:
Integrates technical achievement with cost and schedule performance.

How is it innovative and creative?
An enhancement to Earned Value Management.

How has this new improvement been applied?
On a joint FAA–NAVAIR prototype with Hughes and on the PMA276 H–1 Program with Bell.

What were the results and lessons learned in developing this improvement?
Early warning of technical risk in terms of cost and schedule.

What other information would help another program evaluate its applicability towards their program?
White paper/presentation can be provided.

Truly Integrated Baseline Review (TIBR)

Earned Value

SPAWAR703/602–2457 – phone
Thornton, John A. 703/602–0123 – fax
Advanced Deployable Systems (ADS) thorntoj@smtp–gw.spawar.navy.mil
SPAWAR PMW 183
2451 Crystal Drive
Arlington, VA 22202–3518

What program are you with?
Advanced Deployable System PMW 183
What is the name of your new idea, approach, process innovation, or lesson learned?
Truly Integrated Baseline Review (TIBR)

Give a description of this idea and how it fits in the program:
A Truly Integrate Baseline Review (TIBR) includes not only the contractor's proposed cost, schedule and performance baselines, but the Government's effort as well.

How is it innovative and creative?
An integrated baseline review is necessary in these day of tight budgets and schedules and to control growth and get buy in from the government on the contractors approach. However, the government

effort is not usually included in this planning. The baseline should include the products that the government will deliver to the contracted effort or support the government will provide in testing or evaluation. This is especially important for programs with significant government laboratory or university support.

How has this new improvement been applied?

The government laboratories, universities and support contractors effort are all included in the TIBR plan. That way the government is part of the process and not just a checker of work products. The government team is then responsible for design of certain assemblies, and is involved in the design of the system as a whole. This approach has also allowed us to begin the implementation of an earned value management approach for the government resources.

What were the results and lessons learned in developing this improvement?

The result has been a well defined plan with all resources applied to solving the problems and not just acting as checkers. Planning for future year efforts is much easier as resources were defined early in terms of products produced or support provided as opposed to man years of generic effort. The government is not used to providing a good plan or allocating resources to a plan. In addition the cost goals or thresholds need to be defined clearly so that early growth does not occur in a bottoms up cost approach.

What other information would help another program evaluate its applicability towards their program?

Primarily if significant government effort is planned then it should be included in the TIBR plan. If the effort is significant and is not planned then the government resources are being applied without a plan and could naturally fall into the mode of overlookers of work as opposed to contributors.

ENVIRONMENTAL

Environmental

NAVSEA 703/602–0017 – phone
Smith, Mr. Jim 703/602–0047 – fax
New Attack Submarine Program smith_jimmy@hq.navsea.navy.mil
PMS450
2531 Jefferson Davis Highway
Arlington, VA 22242–5169

What program are you with?
New Attack Submarine Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Instituting environmental commitment and awareness early in a program and maintaining a constant focus on it throughout program execution.

Give a description of this idea and how it fits in the program:
The New Attack Submarine Program structured its environmental program to identify and consider all viable environmental alternatives early during the design phase, through the Integrated Product and Process Development approach. The environmental hazards and life cycle cost reductions that will be realized by this process are significant.

How is it innovative and creative?
The New Attack Submarine's Environmental focus is on the input rather than the output. Instead of focusing on how to dispose of hazardous materials used in submarines, the New Attack Submarine Program has devoted resources to investigating how to avoid the use of hazardous materials from the start.

How has this new improvement been applied?
This improvement has been facilitated by several approaches:

- Developed a Pollution Prevention Strategy to provide specific pollution prevention guidance to all key program participants.
- Invested R&D to design and develop new systems that avoid the use or production of hazardous materials.
- Prepared a New Attack Submarine Hazardous Materials Avoidance List to aid designers and planners in eliminating or reducing hazardous substances from the submarine's design.
- Recycling materials from deactivated submarines when nonhazardous substitutes are not available. This reduces the amount of hazardous material that needs to be managed from initial manufacture to ultimate disposal.
- Developing a Hazardous Materials Map that identifies the location and type of hazardous materials used in the submarine when they are unavoidable.
- Created a Disposal Cut Plan to help designers and planners develop a submarine that can be efficiently recycled and disposed.
- Conducting Annual awareness training for government and contractor personnel.

What were the results and lessons learned in developing this improvement?

- A twofold decrease in the amount of spent nuclear fuel requiring disposal compared to previous classes of submarines.
- Elimination of primary lead shielding and a reduction in the overall amount of secondary lead shielding.
- As compared to earlier submarines, a 90% reduction in the volume of contaminated material requiring disposal.

- A 61% reduction in the number of adhesive products to be used on the NSSN.
- A 31% reduction in the number of paint products.

What other information would help another program evaluate its applicability towards their program?

The Integrated Product and Process Development (IPPD) approach provides the necessary cooperative, team-oriented climate to implement such a broad environmental program. Environmental compliance crosses many departmental bounds to which an integrated product team approach provides the optimum solution.

GOVERNMENT PROPERTY – TRADE-IN

Government Property – Trade-In

NAVAIR 703/604–2060x4819 – phone
Kenlon, Ms. Michele 703/604–2613 – fax
C–9 Replacement KENLONMP.NIMITZ@NAVAIR.NAVY.MIL
PMA–200
1421 Jefferson Davis Hwy.
Arlington, VA 22243

What program are you with?
C–9 Replacement Aircraft

What is the name of your new idea, approach, process innovation, or lesson learned?
One-for-one trade-in of used assets to offset the overall cost of replacement aircraft.

Give a description of this idea and how it fits in the program:
Navy owned aircraft which are being replaced through competition would be "traded-in" to the winning contractor on a one-for-one basis. The winning contractor would broker the sale of the aircraft and apply the proceeds as a credit for the Navy customer to offset the price of the replacement aircraft (or to reduce the cost of support).

How is it innovative and creative?
Typically, proceeds from the sale of government assets are returned to the Treasury rather than the originating agency/program office. By applying such an approach, the net proceeds of the trade-in would be made available to the agency/program office to offset procurement costs.

How has this new improvement been applied?
It is currently being implemented.

What were the results and lessons learned in developing this improvement?
N/A

What other information would help another program evaluate its applicability towards their program?
N/A

GSA SCHEDULES

GSA Schedules

MARCOR703/784–2546x253 – phone
Gale, Mr. Joe 703/784–3241 – fax
Project Officer, program Manager for Training Systems galej@mqg–smtp3.usmc.mil
SST
Marine Corps Systems Command
Quantico, VA

What program are you with?
Remoted Engagement Training System (RETS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Acquisition via GSA Schedule

Give a description of this idea and how it fits in the program:
In 1987 the Army let a contract to have 271 Target lifting devices built for the Marine Corps using Marine Corps funds. After a great deal of give and take, the Contractor was terminated for cause (non-delivery). The funds could not be recovered as they were expired and being held due to a law suit filed by the Contractor. By late 1996, the number of Target Lifting Devices needed had increased to 350 and the need had become critical. We (SST) approached the Contracting Officer (CTQ) seeking help in getting a rapid procurement. The requirement called for the acquisition of 350 Tank Target Mechanisms (TTM) with 10 programmable radio controllers and 5 computer control target interfaces. The estimated dollar value was $2 million, which was $1 million above the Maximum Ordering Limitation (MOL) on the GSA schedule. Acquisition Reform lifted the ordering limitation, therefore allowing MCSC to procure the TTMs off GSA Schedule.

How is it innovative and creative?
Using the GSA Schedule, which was already competed and negotiated, enabled MCSC to award quickly because there were no requirements to synopsize or write a Justification and Approval.

How has this new improvement been applied?
Although the GSA price is negotiated, CTQ and SST performed market research to ensure USMC received a fair and reasonable price. Due to the large order, a quantity discount was received. Acquisition Reform allows items not on GSA schedule to be purchased on the same delivery order placed under a GSA contract. In addition to a dollar discount, CTQ negotiated these additional items at no additional cost: installation, training, the addition of a double pyrotechnic connector, a modification to allow connection to the Government-owned Jonnell devices, 72 battery rechargers, 278 solar panel packages including ground mounts and regulators, and spares.

What were the results and lessons learned in developing this improvement?
MCSC received a value of 6.5% to 8.5% off the GSA contract price. At no additional cost, MCSC received items not on schedule. Without acquisition reform, those same items would have taken months to procure using full and open competition, and MCSC would have incurred additional administrative expense. MCSC procured the TTMs using best business judgment by considering past performance, evaluating for an environmentally-sound design, negotiating a fair and reasonable price, and working as expeditiously as possible so that delivery requirements could be met.

What other information would help another program evaluate its applicability towards their program?

IDIQ CONTRACTS

IDIQ Contracts

NAVSEA 703/602–9079x201 – phone
Goodling, C. R. 703/602–2070 – fax
AN/UYK–43(V) Goodling_C_Ronald@hq.navsea.navy.mil
SEA 91W5
Naval Sea Systems Command

What program are you with?

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson learned: Reconcile the books monthly

Give a description of this idea and how it fits in the program:
On a requirements or IDIQ contract with engineering services, it is necessary to reconcile the books between the Navy and the contractor at least monthly to ensure that efforts performed, items expensed and modifications to orders are all in synchronization to avoid confusion, overcharging and mischarging.

How is it innovative and creative?
Nothing innovative, it just saves time and money in the long-run.

How has this new improvement been applied?
This process has been applied over several contracts to ensure that everything is on track.

What were the results and lessons learned in developing this improvement?
The result was that the contractor could Journal Voucher(JV) charges out of a task when an error occurred thus saving lengthy audits. The Navy could ensure that funding was not misapplied and that funding was not lost because of accounting errors.

What other information would help another program evaluate its applicability towards their program?
N/A

IDIQ Contracts

NAVSEA 703/602–9079x201 – phone
Goodling, C. R. 703/602–2070 – fax
AN/UYK–43(V) Goodling_C_Ronald@hq.navsea.navy.mil
SEA 91W5
Naval Sea Systems Command

What program are you with?
Navy tactical computers and displays division

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson learned: Ensure total coverage

Give a description of this idea and how it fits in the program:
On a requirements or IDIQ production contract with multiple orderable items with multiple pieces, ensure that everything is priced before the contract is signed.

How is it innovative and creative?

Nothing innovative, it just saves time and money in the long-run.

How has this new improvement been applied?
This process has been applied over several follow-on contracts to ensure that everything is priced prior to signing so that there is no confusion at the lowest levels about what is included and what is not.

What were the results and lessons learned in developing this improvement?
The result was that the procurement analysts could put together a price for an order with minimal consultation with technical personnel.

What other information would help another program evaluate its applicability towards their program?
N/A

IDIQ Contracts

NAVSEA 703/602–9079x201 – phone
Goodling, C. R. 703/602–2070 – fax
AN/UYK–44(V) Goodling_C_Ronald@hq.navsea.navy.mil
SEA 91W5
Naval Sea Systems Command

What program are you with?
Navy tactical computers and displays division
What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson learned: Don't do multiple or second sources

Give a description of this idea and how it fits in the program:
On a requirements or IDIQ production contract with multiple orderable items do not do multiple sources or second sources. The quality and reliability of items from the various vendors may vary from one to the other even though adequately qualified. It is a nightmare to manage from a split award aspect to ensure that each gets the appropriate split from order-to-order and year-to-year. And in the end it costs the government big money to do the qualification.

How is it innovative and creative?
Nothing innovative, it just saves time and money in the long-run.

How has this new improvement been applied?
N/A

What were the results and lessons learned in developing this improvement?
The lesson learned through implementation of a second source program was that much time and money was expended to develop and qualify a second source and in the long run that source does not have adequate expertise to go back and do redesign when diminishing manufacturing sources require it. A manufacturing house alone is insufficient to handle the complexities and in a downsizing environment this becomes extremely important. It is therefore necessary to maintain a design agent capability at the original design source which also means retaining a manufacturing capacity all of which costs.

What other information would help another program evaluate its applicability towards their program?
N/A

IDIQ Contracts

MARCOR703/784–2546x252 – phone
Messick, SSgt Leland703/784–3241 – fax
Project Officer for PGTS, Program Manager for Training Systems
SST messickl@mqg–smtp3.usmc.mil
Marine Corps Systems Command
Quantico, VA

What program are you with?
Precision Gunnery Training System (PGTS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of Indefinite Quantity Contract (IQC).

Give a description of this idea and how it fits in the program:
In 1989, the Marine Corps procured 287 Precision Gunnery Training Systems (PGTS) for simulation training of the TOW and Dragon weapon systems. The total AO of 335 was never achieved due to lack of funding. In 1994, the U.S. Army approved an ECP to replace obsolete, non-supportable CPUs for one type of PGTS of which the Marine Corps owned 37. The ECP was not applied however, again due to funding.

In 1996, a congressional plus-up appropriated $5.9M to complete the AO and the required ECP. Market analysis determined that the required additional PGTS' were still in production, however the contract from which the Marine Corps and the Army had previously procured these systems had expired. In March 1996, discussions with Navy Weapons Systems Center, Indian Head determined that both the additional systems and the replacement CPUs could be procured by executing a delivery order on an existing Indefinite Quantities Contract (IQC) for training systems administrated by Indian Head.

How is it innovative and creative?
Utilizing the IQC had two distinct advantages: it would greatly reduce the time required to solicit, contract and field; and it would provide a cost savings benefit by accomplishing both tasks (new systems and ECP) on the same contract.

NWSC Indian Head was given the contracting effort in May 1996. Contract award was September 1996. Deliveries will begin in July 1997, and will be complete by December 1997.

How has this new improvement been applied?
A similar effort is underway for the Light Armored Vehicle Full-crew Interactive Simulation Trainer (LAV–FIST). Marine Forces Reserve (MARFORRES) identified an emergent requirement for a precision gunnery full crew trainer in order to maintain LAV crew proficiency in the spring of 1996. In October 1996, they funded this requirement via NGREA. Again, NWSC Indian Head's IQC for training systems was utilized to procure an NDI/COTS system. It is expected that a delivery order will be placed against the IQC in February with delivery of the required six systems to begin in the summer of 1997.

Additionally, new SECNAVINST 5000 has allowed for a quicker turn-around on required program documents. Using accelerated acquisition program techniques allowed by the new Instruction, the ACAT IV designation will be approved by the COMMARCORSYSCOM and all required documentation, to include the MCPDM, will be approved by the Program Manager for Training Systems.

What were the results and lessons learned in developing this improvement?

IQCs are extremely beneficial when procuring NDI/COTS systems. NWSC Indian Head administers a number of IQCs covering a wide range of procurement requirements.

What other information would help another program evaluate its applicability towards their program?

INFORMATION SYSTEMS

Information Systems

NAVAIR
Meyer, CDR Dean
P&SD Propulsion & Power Integrated Product Team
PMA–265
PEO(T)/PMA265 703/604–3290x7827 – phone
1421 Jefferson Davis Hwy. 703/604–3757 – fax
Arlington, VA 22243–5210

What program are you with?
F/A–18

What is the name of your new idea, approach, process innovation, or lesson learned?
IPT working with NCTS Pensacola to develop F404 (engine) Home Page on internet, with engine description, IPT organization/activities/recalls, Maintenance Forum, ECP tracking system, Inventory database access, and more.

Give a description of this idea and how it fits in the program:
This page allows fleet to access much more than just bulletin board format information. It will be a working tool for fleet users that allows real time access to inventory and logistics databases at NAVICP and DSC Richmond (principal govt parts suppliers) at various controlled levels of access. This will allow visibility to status of orders, parts availability, delivery schedules and forecasts. The ECP (Engineering Change Proposal) tracker will provide a single site for all involved in the process to view and edit the document through to completion.

How is it innovative and creative?
NCTS Pensacola is developing this tool/technology and claims it is not yet even applied effectively in industry. It uses state of the art communication capabilities to interface with all applicable agencies and the fleet directly, significantly reducing processing time and increasing awareness. The development of this tool originated in a combined Government/Industry forum the F/A–18 program sponsors called the Key Supplier Symposium. Participants identified the need for improved information dissemination and streamlined processing tools. Several other processes have also been targeted as candidates for inclusion on the Home Page.

How has this new improvement been applied?
The database access is expected to reduce supply Item Manager workload tremendously, allowing them to concentrate on accuracy of forecasts and orders. The ECP tracker will allow all players to contribute in parallel and greatly reduce processing time through elimination of mailing distribution and use of automated documents with editing capability.

What were the results and lessons learned in developing this improvement?
Development of this approach required extensive interface with Public Affairs Office and Security agencies. The prime vendor is co-developing the initiative and will be expanding the utility across other programs.

What other information would help another program evaluate its applicability towards their program?
NAVICP (Naval Inventory Control Point) and DLA (Defense Logistics Agency) have already identified this initiative as the standard for all other platforms and programs in the supply world, including all Surface and Sub-Surface programs. The F414 engine (F/A–18 E/F) program will develop a similar capability. Much of the costs associated with the development of this tool have been covered by the Propulsion and Power IPT. Future applications for other programs or products will

not require application development costs. The format will be owned by the Navy, and NCTS Pensacola can afford the service at very low prices to cover program/product specific page requirements. Hardware and software requirements are common and most users should already be capable of immediate utilization.

IPPD

IPPD

SPAWAR703/602–2457 – phone
Thornton, John A. 703/602–0123 – fax
Advanced Deployable Systems (ADS) thorntoj@smtp–gw.spawar.navy.mil
SPAWAR PMW 183
2451 Crystal Drive
Arlington, VA 22202–3518

What program are you with?
Advanced Deployable System PMW 183

What is the name of your new idea, approach, process innovation, or lesson learned?
An approach to successful Integrated Product and Process Development (IPPD)
SEE ATTACHED PAPER

Give a description of this idea and how it fits in the program:
The attached paper fully describes the approach taken to successfully implement an Integrated Product and Process Development.

How is it innovative and creative?
Given the present state of development budgets it is imperative that programs efficiently use money resources available. An Integrated Product and Process Development is an effective way to meet those requirements.

How has this new improvement been applied?
A detailed accounting of how this process has been applied is presented in the attached paper.

What were the results and lessons learned in developing this improvement?
The results have been an excellent relationship between the government and contractor and a development program that is meeting its cost and schedule goals and requirements.

What other information would help another program evaluate its applicability towards their program?

An Approach to Successful Integrated Product and Process Development (IPPD)

John A. Thornton
Space & Naval Warfare Systems Command
2451 Crystal Drive
Arlington, VA 22245-5200

Michael A. Luczak
TRW System Services Company
One Federal Systems Park Drive
Fairfax, VA 22033-4416

ABSTRACT

Today's Department of Defense (DoD) acquisition environment challenges program managers with seeking new, innovative and efficient ways to develop their systems. One of the ways in which the government and contractor program managers for the Navy's Advanced Deployable System (ADS) Program have responded to this DoD challenge is through implementation of an Integrated Product and Process Development (IPPD) methodology for their system development. This article describes the program's successful IPPD implementation for development of its Underwater Segment and offers recommendations to other program managers interested in embarking on such a path.

INTRODUCTION

The Navy's Advanced Deployable System (ADS) Underwater Segment (UWS) Team has successfully implemented an Integrated Product and Process Development (IPPD) methodology for the development of its segment. This has been accomplished principally as a result of the commitment of the Navy and contractor program managers to leverage off the flexibility provided to them by recent DoD Acquisition Reform initiatives to do what is right for their programs. For this program, IPPD has been

targets of interest (Wet End Subsystem). The UWS IPT (which consists of all persons involved in the segment development) is guided by a government-contractor developed Management Plan. This plan incorporates the numerous processes discussed in this article and has allowed the contract Statement of Work to be significantly streamlined.

accomplished by: breaking down the traditional government-contractor barriers through the effective use of government-contractor, multi-disciplinary Integrated Product Teams (IPTs) empowered with decision-making authority, committing a significant amount of up-front effort and resources to establish a clear and executable baseline, and following a disciplined approach to segment development. This article specifically addresses how the Underwater Segment team of the ADS Program has implemented IPPD during the first year of its Program Definition and Risk Reduction (PD&RR) Phase. It describes how the government and contractor resources have been efficiently combined to form a single team and the elements of the disciplined approach to the development effort.

BACKGROUND

The ADS Program mission is to provide Fleet Commanders with an undersea surveillance capability that can be rapidly and covertly installed in a shallow water regional contingency battlespace.

The Underwater Segment (UWS) of the program consists of the software and hardware necessary to plan an ADS mission (Mission Planning Subsystem), install the system (Installation Subsystem) and detect

The key players in the UWS development are the Navy's ADS Program Office (under the Space and Naval Warfare Systems Command (SPAWAR)), the contractors, including the prime contractor, Lockheed Martin, and its two subcontractors, Alliant Techsystems, and Bolt, Beranek and Newman (BBN), a number of government laboratories, and support contractors.

STEPS TAKEN TO IMPLEMENT IPPD

Establishing ADS Program Philosophy

The Navy's ADS Program Manager's vision as stated in his Program Management Plan is:

"The Contractor is the key to our success. We intend to work cooperatively to develop an affordable shallow water surveillance capability. The Government team will strive to ensure that the Contractor understands the requirements. The Government Team will provide added value to the Contractor's efforts."

The ADS vision essentially signals a need to rethink and change the way systems have been developed in the past, including the vital government-contractor relationship. It is totally consistent with a defense budget which mandates reduction in system procurement costs and is the type of focus needed to meet the goals of DoD Acquisition Reform initiatives.

During the program's Post Award Conference, the Navy Program Manager presented a few straightforward "guiding lights" which would serve as the foundation for system development and team operation during the PD&RR Phase. These principles included:

"Do What Is Right". This is meant to break the inclination of doing things the way they have always been done and to undertake work only after the objectives of an effort are understood and when the effort is believed to add value to the Program.

"Program First – Contractor First". The ADS Program must have the highest priority in all ADS team member's work and all effort must first serve the program. Since ADS is the highest priority and the contractor is the key to our success, the ADS contractor will come first. Everyone will work to make the contractor a success.

"Requirements Definition". By the Integrated Baseline Review (IBR), the ADS team will define the physical and operational requirements for ADS as well as contractor Statement of Work (SOW) requirements. At a minimum, the rationale and the owners of all requirements will be identified.

The joint government-contractor team agreed early-on that a properly implemented IPPD methodology would be the most effective way to carry out this program philosophy.

Establishing the Organization

Subsequent to the Post Award Conference, the UWS Team set out to establish an organization based on IPTs. The consensus was that the IPTs would be multi-disciplinary and that leadership and membership would draw from the most capable government and contractor resources available. This meant that government and contractor people would work shoulder-to-shoulder while performing many tasks. The team also agreed that all IPT members would be workers; that is, there would be no "checkers". Instead, the

government would be adding value to the product development solution and would not be just checking the finished product. Finally, it was acknowledged that considerable collocation of team members would be required. The site chosen for the collocation was the Alliant Techsystems facility, since most of the design, development and testing would take place there.

Within two months of program inception, a professionally facilitated team launch/ training session was used to develop definition of team roles and responsibilities and to provide preliminary definition of the processes to be used by the IPTs. The session included full participation by the members of the UWS Team and was effective in quickly building team cohesion. For the team launch/training, we organized into four teams based on our best guess as to what team structure would most effectively meet our needs. The session validated this structure and it is shown in Figure 1.

One of the four teams, the Systems Engineering and Management Team (SEMT), is directly responsible to the program managers for delivering the UWS products on schedule, within budget and to an agreed upon level of performance. The SEMT includes leads from the Subsystem IPTs and is co-chaired by a government and contractor representative. Following the team launch, this management team continued refinement of the management processes and ultimately documented them in the joint government-contractor UWS Management Plan.

The other three teams are organized as IPTs at the subsystem level (i.e., Wet End Hardware, Installation, and Mission Planning Subsystems). Two of the teams are chaired by contractor personnel, and the other by a government laboratory engineer. Each Subsystem IPT is responsible for decisions affecting his product and producing the product necessary to deliver a fully integrated segment. In other words, the SEMT provides the foundation and direction to the team and the Subsystem IPTs provide the building blocks for the system.

zation

teams has a standing up of stakeholders from an nd functional discipline rganizationally, the teams ation from the government he prime contractor and its overnment laboratories and rs. Functionally, the teams ship from Supportability, cibility, Test and Evaluation, Design Engineering and ing. Resources beyond the ship are used to the extent he issue at hand.

UWS team members are routinely, or as needed, participants in other ADS teams and working groups which deal with other system segments, issues of broader scope, system level issues or system integration issues. These groups include Supportability, Life Cycle Cost, Test and Evaluation, System Integration, Fleet Interface, and other segment IPTs and Process Teams. Representation from many of these groups is provided to the UWS IPT to ensure cross- fertilization between all groups.

Establishing the Management Approach – The IPPD Model

The model for managing the UWS IPPD is shown in Figure 2. The two major elements of the IPPD are the Integrated Product Teams (IPTs) and a disciplined Integrated Development Process (IDP). A primary premise of the IPPD model is a holistic approach to development whereby management and the technical disciplines are brought together to produce the product. In addition, the government and

together to collectively achieve the
s required a dedication and allegiance
d to organization or discipline.

e previous section is the heart of the
team is responsible for defining and
e development process in the form of
(specifications) and process
ent controls), and the expected outputs
ding planning and reporting of cost,
nce (Earned Value and Technical
ent)), hardware and software (test
a Technical Data Package (drawings,

Figure 2. IPPD Model

egrated Development Process (IDP)
s. The IDP transitions through planning,

eline

changed as the program progressed
the development phase. During the
stem IPTs were not clearly defined
he SEMT. During the development
ome more traditional, with multi-
ciplinary participation. Also, IPT
opment phase is more representative
s we approach the evaluation phase,
by a test engineer.

nts. A prerequisite for an effective
ly defined hardware and software
equirements and clearly delineated
el UWS requirements are defined in
ese requirements were segregated in
velopment Specification (PIDS) to
formance requirements that relate to
nents were then further allocated to
that each team had well-defined
.

nts. Numerous processes and the
s were designed and agreed upon by
re critical processes include systems
and performance baselines, baseline
l Value management, Technical
(TPM) and data and configuration

manufacturing processes, installation processes etc.), and decision products (documented technical trades and lower level design decisions).

Before the Integrated Development Process could begin in earnest, the Subsystem IPTs and the SEMT had to reach concurrence on the inputs and outputs of the process. That effort was grueling, time consuming and often frustrating. However, at each iteration, the output of that effort has consistently been a clearly defined product and well understood responsibilities and expectations.

development and evaluation phases during product development. The phases cannot be considered clear transition points, but are part of a continuum whereby the degree of effort applied in each phase varies over the life of the program. This is shown conceptually in Figure 3. Major milestones signify the transition to the next phase.

management. Various aspects of these processes are discussed later in this article.

Establishing the Program Baseline

The first major milestone following the Post Award Conference was the System Requirements Review (SRR). The review focused on definition of the product requirements and agreement by all parties on the requirements baseline. It was the first real test of the effectiveness of our IPT structure. Our government-contractor team resolved all major issues during the preparations for the review, and very few action items resulted. The review turned out to be more of a report to the government and contractor program managers on what had been accomplished and what was planned, as opposed to the traditional SRR which requires substantial program manager decision-making and direction.

Another key aspect of the SRR was the definition of the systems engineering process. The process was agreed upon during SRR preparations and presented to the program managers at the review. Requirements tracking, specification development and how and when requirements would be verified were the principal systems engineering process topics addressed.

The next major milestone was the Integrated Baseline Review (IBR). The purpose of the IBR was to establish the cost, schedule and performance baseline (or, the plan) for the PD&RR Phase. The baseline was to be an agreement by all parties, government and contractor, on the specific tasks, resources and completion criteria for the program. In order for

ared ownership of the baseline, its
ıtractors' were included in the plan.

from many different backgrounds
a number of different ways. As
portant to kickoff the IBR with a
raining session which defined the
e process, established the rules for
process whereby an effective plan is
l.

verall framework for the IBR by
ogram structure, milestones and
tem IPTs then created their own
For each task, they identified the
included an estimate of the hours
ıment and contractor team member.
PTs to carefully examine subsystem
r which they would be responsible.
ıed by the SEMT for defining the
ıg IPT responsibility) was that the
ıimum number of interfaces and it
iable as an assembled product.

established by the IPTs during the
hnical baseline remained on track.
conformance is the final evaluation,
ere identified and scheduled. These
to provide evidence that the product
s when tested toward the end of the
of TPM parameters were identified
itical characteristics or requirements
were also identified during the IBR
with the performance of certain tasks
ın of how long and how much the

which resulted from the IBR process
Manager to reevaluate the resources
ting early-on in the development.
plan and risk mitigation costs, he
vier up-front investment to reduce

rogram Baseline

t have been overwhelmed with
the baseline. This has been largely
planning and thus an IBR process
table plan. We believe that our early
l us to effectively implement our
as established, the primary focus of
nance of the baseline. This has
sed changes and evaluation of those

changes relative to program goals, while doggedly protecting the program against requirements creep.

Earned Value management is a valuable tool to apply to the development and evaluation phases of the program. Earned Value is used to ensure that the program is on track when measured against the cost and schedule baseline. The process by which Earned Value would be taken and tracked was a major output of early planning. The Earned Value process applies to both the government and contractor IPT resources. This unique concept had many difficult implementation problems, especially at government laboratories where it was an unfamiliar approach. A principal charter of the SEMT has been to continually review progress against Earned Value and make required midcourse adjustments.

Controlling the Program Baseline

Shortly after the cost, schedule and performance baseline was established, a process to control the baseline was defined. The baseline control process is a primary responsibility of the SEMT. Changes to the product requirements as a result of forces internal and external to the development effort can have a major impact on the baseline, and their effects ripple down through the requirements tree to the lowest level of the product. Both external and internal changes are reviewed by the management team to ensure that they are necessary, are adding value and that all life- cycle implications have been considered. External changes, depending on their source, have oftentimes been more difficult to negotiate; however, they are all nevertheless evaluated in the same manner as internal changes, and recommendations are made to the program managers.

Our objectives for a configuration management process were to define an approach which was affordable and not too onerous. Our decision was to let the organization that is producing most of the drawings and performing most of the manufacturing propose the process and then have the IPT adopt it as a whole.

Tools for Effective Communications

A unified and complete Data Management process is required to ensure that program and system design data are documented and managed throughout the development life cycle. The Data Management process approach should allow easy and quick access to in-process and approved data by all parties of the IPTs. Probably the biggest issue we faced in Data Management was coming to consensus on what types of data we needed to capture in the shared library. Our decision in this area was based on our objectives for Data Management which were to: communicate status, provide real time opportunities for review and development of specifications and the Technical

historical record of why decisions
e-offs were considered in making
e data for life-cycle analysis of cost,
/.

shared database in a Lotus Notes
se objectives. All parties have open
ne data development process. This
ed for formal contract deliverables
ycles and updates typical of Contract
fact that such a compilation of
nical data is centrally located and is
s of the team creates a positive
olved and makes each member of the
s a valued entity.

ormance

IPPD Model described in this article
lts for the ADS UWS development
program phase. We feel confident
path, with necessary adjustments
in the degree of success thus far
nd that other programs consider
thodology using the steps described
em to fit their individual programs.

CLOSING

e this opportunity to thank everyone
nt team for their hard work in this
ent and for helping us author this
the entire team to routinely set aside
nal agendas to create a unique
tionship has been the single most
ess of the first year of the program.
ptain Bill Hatcher, the Navy ADS
ing us the latitude in the name of
a completely new approach, and to
Lockheed Martin Program Manager,
proach and providing resources to

ndings, and conclusions or
d in this material are those of the
arily reflect the views of the Space

The Award Fee Program for the UWS development incorporates objectives based on total IPT performance, and thus contractor performance evaluation is largely contingent on the performance of the government team. Additionally, the objectives are jointly defined in terms of what is good for the program; this approach is not necessarily consistent with that needed to attain established contractor corporate goals. However, the performance of the IPTs to date has obviated this concern. Additionally, since the government and contractor are working hand-in-hand, status of progress towards meeting Award Fee objectives is always known.

It is noted that the Underwater Segment team was recently recognized by the Assistant Secretary of the Navy for Research, Development, and Acquisition (RD&A) for its successful implementation of Acquisition Reform initiatives.

CONCLUSIONS AND RECOMMENDATIONS

and Naval Warfare Systems Command. This material is based upon work supported by the Space and Naval Warfare Systems Command under contracts N00039-96-C-0023 and N00039-95-C-0072.

AUTHOR BIOGRAPHIES

John A. Thornton received his B.S. (1982) in Ocean Engineering from Florida Atlantic University and his M.S. (1989) in Civil Engineering from The George Washington University. He is a registered professional engineer in the State of Virginia, and has worked for the Navy for 14 years. His primary areas of interest are underwater fiber optic cables and ocean systems. He is currently the Assistant Program Manager for the Advanced Deployable System, a new acquisition program developing advanced acoustic sensing systems.

Michael A. Luczak received his B.S (1968) in Education from State University of New York at Geneseo and his M.S. (1985) in Electrical Engineering from the U.S. Naval Postgraduate School. During the past five years he has worked as a Senior Systems Engineer with TRW System Services Company in Fairfax, VA. His primary emphasis has been in the area of Undersea Surveillance System development. Prior to that he spent 21 years as a Naval Surface Warfare Officer and Anti-Submarine Warfare Specialist and retired as a Navy Commander.

IPPD

NAVSEA 703/602–0017x124 – phone
Lose, Steve 703/602–0047 – fax
New Attack Submarine (NSSN) lose_steve@hq.navsa.navy.mil
PMS450
2531 Jefferson Davis Highway
Arlington, VA 22242–5169

What program are you with?
New Attack Submarine (NSSN)

What is the name of your new idea, approach, process innovation, or lesson learned?
Associate Contractor Agreements

Give a description of this idea and how it fits in the program:
Associate contractor agreements were put in place between the NSSN Design Yard (Electric Boat Corporation) and the NSSN Command, Control, Communication, and Intelligence (C3I) System Prime Contractor (Lockheed Martin Federal Systems). The purpose of the agreements is to improve communication between the shipbuilder and the key system developer and integrator to encourage the companies to identify and solve issues involving complex interfaces in a way that is best for the total program.

How is it innovative and creative?
The associate contractor agreements take the onus of day to day managing system interfaces off the government. It allows the two companies to work together to solve technical problems and propose optimum "total perspective" solutions to the government.

How has this new improvement been applied?
The agreements were a requirement of the Integrated Product and Process Development design contract with Electric Boat and the C3I System prime contract with Lockheed Martin. The agreements were put in place in July 1996, shortly after award of the C3I System contract. Cooperation between the two companies is one of the factors motivated by the incentive provision and award fee evaluation criteria in the respective contracts.

What were the results and lessons learned in developing this improvement?
The agreements have only been in place for a short time, yet the program has already seen benefits of the arrangement. The two companies work together to more timely solve technical problems which in the past would have required substantial involvement by, and risk to, the government.

What other information would help another program evaluate its applicability towards their program?
It is applicable to all programs which have substantial interfaces between systems designed and constructed by two or more different companies or organizations.

IPT

IPT

PEO–SCS 703/602–4335 – phone
O'Connell, CAPT John 703/602–7648 – fax
Advanced Tactical Data Link Systems Capt_John_O'Connell@smtp–gw.spawar.navy.mil
PMW 159
Program Executive Officer, Space, Communications
and Sensors
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
PEO SPACOMMSENS, Advanced Tactical Data Link Systems (PMW 159)

What is the name of your new idea, approach, process innovation, or lesson learned?
Submarine Link–16 Integrated Product Team

Give a description of this idea and how it fits in the program:
The three-tiered Submarine Link–16 IPT was formed to develop a unique solution to integrate the Link–16 communications system into submarine platforms. This required the cooperation and coordination of three program offices, OPNAV sponsors, fleet users, and numerous field activities/codes and contractors. Sub-IPTs were formed to develop solutions to each unique aspect of the integration effort, as well as to address typical areas such as ILS and T&E.

How is it innovative and creative?
During the typical procurement process, often not enough attention is paid to true customer requirements or to the life-cycle support aspects of the product. This three-tiered IPT includes the designers and developers from the various organizations, OPNAV sponsors, several SYSCOM program offices, as well as the fleet users and the members of the life-cycle support engineering team.

How has this new improvement been applied?
The first IPT tier is comprised of the OPNAV sponsors and program offices, and addresses funding and programmatic issues. The second tier consists of the third tier team leaders. The tier 2 meetings provide a forum where all aspects of the program are briefed and discussed to ensure that the team does not deviate from the "big picture" and maintains focus on the pertinent issues. The third tier is where the actual technical research and development takes place for each unique aspect of the integration effort. Members of the third tier include the designers and developers, system experts, fleet users, and the life-cycle support team.

The IPT and sub-IPTs meet regularly so that every aspect of the overall development and integration meet all user requirements and will be fully supportable. The addition of the support activity on the IPT has the added benefit of little to no ramp-up time for engineering support from the field activity.

What were the results and lessons learned in developing this improvement?
Found that some team members belong on several sub-IPTs, and that we had to be flexible in adding new sub-IPTs as new information evolved. Careful advance planning of the IPT structure will ensure that no details are overlooked and that the end product meets fleet operational requirements and provides the best support solution.

What other information would help another program evaluate its applicability towards their program?

Any IPT that is formed to develop and procure a product for a customer can benefit from the inclusion of the customer and support activity on the team.

IPT

NAVAIR 703/604–1000x3820 – phone
Lanes, CDR Fred 703/604–1216 – fax
Tomahawk Baseline Improvement Program lanes@lan–email.peocu.navy.mil
PMA–280
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?

Tomahawk Baseline Improvement Program

What is the name of your new idea, approach, process innovation, or lesson learned?

"Integrated Product Team Costing".

Give a description of this idea and how it fits in the program:

Cost identification and control is one of today's major thrusts in acquisition reform. "IPT costing" is a paradigm buster. During the era of the matrix organization, a contractor would submit work requirements in the form of a work breakdown structure (WBS) for a statement of work to the government. This would then be distributed for review, negotiations and eventual contracting. IPT costing has the joint IPT's derive the appropriate WBS as a team effort, rather than a "throw it over the wall approach" as in the past.

How is it innovative and creative?

This approach allows the Program Manager to identify early in a proposal, through his IPT leads, the level of effort expended on tasks. It is a proactive, rather than a reactive approach. Real time government insight is the initiative here.

How has this new improvement been applied?

TBIP is currently definitizing an undefinitized contract action (UCA). During this definitization, each IPT lead is responsible for understanding what efforts the contractor is pricing in the proposal. Both government and industry leads are then asked to sign the team input to the overall WBS structure. For a cost plus contract, this signature ensures that the IPT leads understand what has been included and what has not been included in the dollar figure. If a disagreement arises, this is resolved at the program management team level.

What were the results and lessons learned in developing this improvement?

This process is still in work at this writing, so the jury is still out. However, I envision, as does the contracts PCO, that definitization time will be significantly reduced, and have the desired effect of streamlining the acquisition process.

What other information would help another program evaluate its applicability towards their program?

N/A

IPT

NAVSEA 703/602–7881 – phone
Cameron, Jack 703/602–5385 – fax
Strategic Sealift Program, PMS385 Cameron_Jack@hq.navsea.navy.mil
PMS308
2531 Jefferson Davis Hwy
Arlington, VA 22242–5171

What program are you with?
Strategic Sealift Program (PMS385)

What is the name of your new idea, approach, process innovation, or lesson learned?
Benefits of Teaming

Give a description of this idea and how it fits in the program:
Effective Teaming includes all parties to a project, giving each (in and out of Government) a stake in the final outcome. This facilitates identification of potential problems and contributes to solutions. Within the framework of the Strategic Sealift Program, Teaming was employed to develop open communication among a varied group of participants, (Navy, Shipbuilders, Regulatory Bodies –ABS and USCG, Army, Military Sealift Command) and create a true win-win situation for all parties.

How is it innovative and creative?
Teaming was innovative in the case, because it was used to develop open channels of communication between a large and varied group of players, each with their own goals. The atmosphere created encouraged the participants to dismantle the cultural walls between them and the other participants and begin to seek new ways to reach both individual and common (group) goals.

How has this new improvement been applied?
Teambuilding sessions are included in each program review at the shipyards. These sessions serve to identify common goals and to improve communication and trust among the participants. Additionally, the Program Manager conducts conferences every six months to bring participants together for brainstorming on program issues, examination of lessons learned on each project, and further teambuilding sessions.

This approach also required that the Program Manager empower his Assistant Project Managers to make decisions on each project based on a full understanding of program goals and priorities.

What were the results and lessons learned in developing this improvement?
Applying the concept of Teaming to the Strategic Sealift Program and the individual projects within the program has resulted in a reduction in the time required to identify and resolve program challenges which has led to cost reduction and avoidance. Each of the individual projects realized improvement in communication over the course of the project. Key factors in the degree of success achieved on each project, and over the program as a whole, were the willingness of organizations and individuals to assume the risk required to develop open communication and share information. Results from efforts toward Teaming come slowly. Initial gains will be small as organizations and individuals develop trust, and the integrity of the individuals and the organizations must be prized above all. The trust and openness that take so long to develop can be destroyed in a moment.

What other information would help another program evaluate its applicability towards their program?

Effective Teaming requires a willingness to assume a degree of risk based on your trust of the other participants. The concept can and should be applied to some degree on all programs.

IPT

NAVAIR 703/604–2276, 7069 – phone
Caniglia, Ken 703/604–3003 / 2394 – fax
H–1 Upgrade Program
PMA–276
JP1, Room 610

What program are you with?
PMA–276 4BW/N Upgrade Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Core Integrated Program Team H–1 Upgrade Management
(re - Attachment A)

Give a description of this idea and how it fits in the program:
The Core IPT functions as the joint management control for the H–1 Upgrade Program. The core IPT is made up of Government and Contractor representatives from Engineering, Programs, Operations (manufacturing), Logistics and Materials (purchasing) competencies. This body has judicatory responsibility over all issues put forward from the Analysis and Integration (A & I) Teams.

How is it innovative and creative?
Core IPT management differs from other IPT structures in that all A & I Team issues are resolved by a joint management core IPT as opposed to a single Program Manager. This brings to bear the collective experience of the Leadership Team to resolve A & I issues.

How has this new improvement been applied?
Core IPT management (Attachment A) is the final authority for H–1 Upgrade Program.

What were the results and lessons learned in developing this improvement?
The core IPT was incorporated into the H–1 Upgrade contract signed Nov ‘96 and is in place. However, the infancy of this initiative has yet to determine a definitive outcome.

What other information would help another program evaluate its applicability towards their program?
A broad interpretation of the Leadership Team’s role as defined in "Integrated Program Team Manual Update" dated Sep ‘96 and to tailor the guidance to best meet the needs of their individual program.

IPT

NAVSEA 703/602–3408x249 – phone
Dickenson, Lawrence W. 703/602–5352 – fax
SSN 688 Class Acquisition Dickenson_Larry@hq.navsea.navy.mil
PMS 393A13B
NAVSEASYSCOM

What program are you with?

SSN 688 CLASS NEW CONSTRUCTION

What is the name of your new idea, approach, process innovation, or lesson learned?
Teaming to facilitate modification and improvements to attack submarines during construction and PSA

Give a description of this idea and how it fits in the program:
Establish a close knit working relationship between NAVSEA program offices, supervisor of shipbuilding offices, design and engineering divisions and shipyard production groups and instill funding and technical decision authority as close as possible to the working level.

How is it innovative and creative?
It bypasses the traditional process of design iteration followed by approvals followed by contracting actions.

How has this new improvement been applied?
All parties actively participate in each phase from concept formulation through installation and testing. Issues are resolved in real time, decisions made and authority is granted to proceed. The process is very similar and in some instances identical to the integrated process team approach now being used throughout the command.

What were the results and lessons learned in developing this improvement?
It has clearly demonstrated that the teaming process is highly conducive to a complex shipbuilding design and construction program, resulting in the successful delivery of improved ship capability with a minimum of schedule disruption and cost while still maintaining control of the configuration at the NAVSEA headquarters level.

What other information would help another program evaluate its applicability towards their program?
An assessment of the successful delivery of the final three SSN 688 class submarines from new construction and PSA.

IPT

NAVAIR 703/604–3344x7308 – phone
Feinberg, Alan E. 703/604–4505 – fax
Pollution Prevention Support Equipment feinbergae.nimitz@navair.navy.mil
PMA–260C
1421 Jefferson Davis Highway
Arlington, VA 22243

What program are you with?
NAVAIR (PMA–260) Aviation Support Equipment Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Acquisition Streamlining and the Pollution Prevention Program

Give a description of this idea and how it fits in the program:
The team has taken advantage of many acquisition streamlining initiatives such as:
A. Conducting market research and using Commerce Business Daily (CBD)-announced Requests for Information (RFIs) to identify potential technologies, equipment solutions and vendors.

B. Conducting technology demonstrations when necessary to insure that the commercial technologies will operate effectively in the Navy environment.

C. Using Naval Air Warfare Center (NAWCAD) Requisition Automatic Processing System (RAPS) which reduces the time to develop and process purchase requests, reduces errors, provides paperless routing through all review and approval codes, verifies funding availability, allows for duplication of similar orders, allows for better status tracking and generally speeds the processing of purchase requests.

D. Increasing the small purchase threshold.

E. Using the purchase card for micro-purchases.

F. Using the streamlined solicitation process allowed under FAR Part 12 to reduce paper volume.

G. Using the joint synopsis/solicitation, when appropriate.

H. Using performance based specifications with the elimination of military specifications to define requirements.

I. Tailoring the logistics support requirements to procure only data essential to support the equipment in the field (typically, commercial manuals and provisioning of consumable parts) to further reduce the life cycle support costs.

J. Relying on the contractor's inspection system in lieu Government imposed standards.

How is it innovative and creative?

The use of changes in the acquisition process resulting from the Non-developmental items (NDI)/ Commercial off the shelf (COTS) items and other simplified acquisition initiatives have had a direct impact on the success of the program.

How has this new improvement been applied?

The ideas have been applied to the gamut of equipment procured under the pollution prevention program. Examples of the life cycle savings that can be expected from these programs are as follows (Note: Return on Investment (ROI) is based on a 10 year life cycle): Paint gun washer – The use of paint gun washers eliminates the wastes, primarily rags and solvents, associated with the cleaning of paint guns and pots. The technology employed is an automated closed-loop system which flushes and cleans paint guns in less than one minute. This equipment reduces the quantity of solvent used in the cleaning process by reusing solvent numerous times, reduces the cost by decreasing waste solvent, reduces by 75% the number of paint rags required , eliminates volatile organic compound emissions (VOC), meets stringent air quality rules (including the South Coast Air Quality Management District (SCAQMD) Rule 1171 for VOC emissions) effectively removes paint while maintaining the surface integrity of paint gun components, reduces labor hours, and provides a healthier and safer working environment. The use of an individual piece of equipment provides a ROI of $45,000 and a break-even period, based on capital expenditures, of 4 months. In FY 96, 120 of these units were delivered to the fleet.

Aqueous Parts Washers – The aqueous parts washers use a non-hazardous, biodegradable, aqueous solution in a closed-loop system to clean the grease and other contaminants from a variety of different parts. This system replaces hazardous solvents and rags used in cleaning parts with a biodegradable detergent, which reduces the toxicity of the waste stream. The system allows the operator to perform other tasks while the parts washer is running, reduces the labor time to clean parts, reduces hazardous waste disposal costs, eliminates personnel from coming in contact with the solvents, and reduces the quantity of the waste stream. The ROI from a single unit is $131,000 with a break-even time of 8 months. In FY 96, 100 of these units were delivered to the fleet.

Isopropyl Alcohol (IPA)/Cyclohexane Vapor Degreaser – The IPA Vapor Degreaser is a self-contained system designed to degrease, clean and dry precision gyroscope instrument bearings using low flashpoint solvents (isopropyl alcohol and cyclohexane) in lieu of an ozone depleting substance (ODS). One unit became operational during FY 96 at Naval Aviation Depot (NADEP) North Island, CA. Based on the results of this technology demonstration, the unit minimizes waste, reduces labor hours, provides cost savings in labor, materials, handling, and hazardous

waste disposal, reduces vapor emissions, provides a healthier and safer working environment, and projects a ROI of $1,600,000 with a break-even time of 7 months. High Pressure Water Blast System – This system uses high pressure water to remove paint and corrosion from equipment. The previous method, using grit blasting, generated enormous amounts of solid waste. With this method, the water is filtered out and reused and the only waste is the used paint. This system provides more operator control to prevent equipment damage, reduces the labor for cleaning parts, reduces costs in labor, handling, and hazardous waste disposal, reduces the quantity and toxicity of the waste stream, and provides a healthier and safer working environment. The hazardous waste disposal costs that are saved by reducing the amount of waste pays for the hardware within one year with a ROI of $2,900,000. One unit became operational during FY 96 at Mobile Mine Assembly Unit (MOMAU) Unit 11, with 4 more units under contract.

What were the results and lessons learned in developing this improvement?

The use of the above techniques resulted in the award of over 75 separate actions totaling $4,000,000, ranging from $200 purchase card actions to a competitive award for a high pressure blast unit for over $1,000,000.

What other information would help another program evaluate its applicability towards their program?

The real success of this program at NAVAIR PMA–260C/NAWCAD Lakehurst rests in the hard work of the members of the integrated product team (IPT). The team consists of personnel from all competencies possessing the skills and talents necessary to implement the individual projects. Program managers, team leaders, engineers (environmental, electrical and mechanical), procurement specialists, logisticians, contract specialists, and tradesmen are all part of the team and have worked in concert to solve problems and overcome obstacles. The use of the IPT concept has reduced the learning curve, enhanced cooperation, avoided duplicate errors, allowed for quick decisions, and generally created an atmosphere for success that has resulted in the growth of the team's responsibility and funding during a time of otherwise shrinking budgets. This has been a win-win situation for OPNAV, NAVAIR, NAWCAD Lakehurst, the fleet, and the general public.

IPT

MARCOR 703/784–4507x2067 DSN: 278–4507x2067 – phone
Havrin, Mr. David703/784–4436 DSN: 278–4507 – fax
Assault Amphibious Vehicles havrind@mqg–smtp3.usmc.mil
PM for Combat Support Weapons
Commander, Marine Corps Systems Command (APM AAV)
2033 Barnett Avenue, Suite 315
Quantico, VA 22134–5010

What program are you with?

Assault Amphibious Vehicle

What is the name of your new idea, approach, process innovation, or lesson learned?

Transmission End Caps Ad Hoc Team

Give a description of this idea and how it fits in the program:

A team of Industry and Government participants got together to brain storm a problem surfacing during reliability testing of the AAV transmission. The part that was failing was not undergoing any corrective actions and the failures could adversely impact the technical reputation of one of the participants. This approach of involving all parties in a team approach resulted in a quick, cooperative and educating process for the benefit of all. The result was a satisfactory and permanent solution to the problem.

How is it innovative and creative?

Previous solutions were generally done in-house in closed groups. These tended to result in partial and temporary solutions made with limited data input. This new creative approach allowed the free flow of ideas and a back and forth discussion focused on the problem and not on defending an external organization or previously established position. Management of all parties remained aloof from the investigation and accepted the final consensus for implementation.

How has this new improvement been applied?

The Technical Data Package was officially changed by use of an Engineering Change Proposal (ECP) to allow procurement of the replacement transmission end caps for inclusion into the current transmission upgrades and retrofitting into already fielded transmissions.

What were the results and lessons learned in developing this improvement?

This approach has validated the dispassionate approach to resolving thorny technical problems and the advantage of using industry participation in resolving concerns with products that bear their company names.

What other information would help another program evaluate its applicability towards their program?

This approach works best when it is clear from previous studies that the cause is truly both troublesome and nebulous and that the owner of the cause will be overwhelmed by the value of the solution.

IPT

NAVAIR 703/604–0946 – phone
Kramer, David 703/604–0816 – fax
Advanced Tactical Weapons Control System Kramer@LAN–EMAIL.PEOCU.NAVY.MIL
PMA–282A
1213 Jefferson Davis Highway
Arlington, VA 22246

What program are you with?

Tomahawk Cruise Missiles

What is the name of your new idea, approach, process innovation, or lesson learned?

Team XXI Development Process

Give a description of this idea and how it fits in the program:

As we move into the 21st century, the environment the acquisition community operates in is changing faster than the old acquisition methodologies can respond to. This results in products being acquired that are outdated before they hit the fleet. We attempted to respond with an innovative approach to software acquisition using a combination of tightly knit government/contractor teams and flexible development environment.

How is it innovative and creative?

This process combines the innovative system development spiral process with the acquisition "waterfall" to provide flexibility when required, but at the same time, the discipline required to successfully meet acquisition milestones.

How has this new improvement been applied?

Initially applied to develop new capability for Naval Fire Support connectivity to Army systems as part of Joint Precision Strike Demonstration (JPSD).

What were the results and lessons learned in developing this improvement?

Innovative and highly successful capabilities developed in JPSD are testimony to the successful process. We are currently updating the process for application to Advanced Tactical Weapons Control System upgrades.

What other information would help another program evaluate its applicability towards their program?

See diagram.

IPT

SPAWAR 703/602–3764 – phone
LeBow, Ms. Nancy 703/602–5891 – fax
Enhanced Naval Warfare Gaming System (ENWGS) lebown@smtp–gw.spawar.navy.mil
PMW 131–21
COMSPAWARSYSCOM
Arlington, VA 22245–5200

What program are you with?
Enhanced Naval Warfare Gaming System (ENWGS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Distributed Program Management

Give a description of this idea and how it fits in the program:
Distributed Program Management is the processes and functions performed by an effective Integrated Product Team (IPT). In the ENWGS program, our IPT members are empowered to initiate appropriate actions, reactions, and innovations to expedite development and attain User goals.

How is it innovative and creative?
It is not specifically innovative, but rather accelerates the processes and functions embraced by Total Quality Leadership (TQL). It puts the ultimate user in the development process and invests those users in the Program execution.

How has this new improvement been applied?
The ENWGS IPT is composed of government and contractor personnel representing the Program Office, the Technical Direction Agent (TDA), the Prime Contractor and most importantly, our IV&V agent representing the users concerns and interests. The IPT meets monthly and defines/validates program initiatives which are presented to the Users at Quarterly Program Reviews (QPRs). Coincident with the QPR, more frequently if warranted, The IPT will bring the Users together in a Technical Working Group (TWG) to resolve development and implementation issues.

What were the results and lessons learned in developing this improvement?
The ENWGS Program was stalled under traditional vertical or stovepipe leadership. Initiating the IPT process and distributing management has invigorated the program participants and is enabling the development effort.

What other information would help another program evaluate its applicability towards their program?

IPT

NAVSEA 703/602–0664x607 – phone
Patel, Anant K. 703/602–0606 – fax
STANDARD Missile–3 (SM–3) Patel_Anant_K@hq.navsea.navy.mil
PMS 422–15
2531 Jefferson Davis Highway
Arlington, VA 22242–5170

What program are you with?
PEO(TAD)/PMS 422

AEGIS LEAP Intercept (ALI) Program/ STANDARD Missile–3 (SM–3)
PMS 422–151

What is the name of your new idea, approach, process innovation, or lesson learned?
Functional IPT

Give a description of this idea and how it fits in the program:
Our program IPT structure is not product oriented rather it's function oriented. The reason for this new IPT structure is mainly to optimize existing contractors infrastructure without disruptions to the program. The SM–3 is developed by SMCo with following major subcontractors work agreements: Hughes Missile Systems, Raytheon, Thiokol, Rockwell, Allied Signal, etc..

How is it innovative and creative?
It is innovative in the sense that we are operating with one goal in mind; that is, to complete the ALI/SM–3 mission to hit the Theater Ballistic Missile target. Company badges and heavy competition among contractors are dropped to meet the mission goal. Necessity is the mother of innovation and our necessity was to utilize existing contractor management structure without imposing significant changes. Creative is the membership. It has Government representation on each of the IPTs as a lead for the Government and Government Participants. This lead is responsible for ensuring that the contractor is meeting the requirements and help resolve issues and problems. Idea is that Government is not the problem, rather, it is problem solver for the program.

How has this new improvement been applied?
The Functional IPT structure is implemented and fully applied throughout the SM–3 missile development program.

What were the results and lessons learned in developing this improvement?
The results are the successful completion of three Interim Design Reviews on schedule with clear understanding between the contractors and the Government. The lessons learned are many, however, it's always difficult in the beginning to communicate. Communication, Coordination and Cooperation are the key to success of IPTs.

What other information would help another program evaluate its applicability towards their program?
"Walk the Talk". IPTs do work, but it requires commitment and support from top level management to make it happen.

IPT

NAVAIR 703/604–2100x5503 – phone
Sutton, USAF, Colonel Jeanne 703/604–2896 – fax
AIM–9X suttonj.jfk@navair.navy.mil
PMA259
PEO(T)/PMA259
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
AIM–9X

What is the name of your new idea, approach, process innovation, or lesson learned?
AIM–9X Integrated Product Team

Give a description of this idea and how it fits in the program:

Unique Government IPT formed that limits oversight to Top Team Management, draws on insight from IPT members, focuses team efforts to either "help" the contractor meet his goals, do work the contractor cannot do by "interfacing" with other Government agencies, and provide team-wide "resources" (funds, people, processes).

How is it innovative and creative?

Government team members assist the contractor in meeting his goals by providing advice based on unique experiences and lessons learned — no direction except from Top Team Management. Small cadre of members spend up to fifty percent of time in-plant.

How has this new improvement been applied?

Extensive Government and contractor team-building, goal setting, metrics development.

– Strong emphasis by program leadership "walking the talk".

What were the results and lessons learned in developing this improvement?

High motivation by Government and contractor team members.

– Training investment is critical.

– Top management must support.

What other information would help another program evaluate its applicability towards their program?

The contract is only two months into EMD with only short-term effects observed, however, this unique IPT has strong potential to provide a means for quick issue resolution, zero constructive changes, focused cost controls.

IPT

NAVSUP 703/602–7469 – phone
Westhoff, Mr. Jim703/602–6415 – fax
COBLU westhofj@smtp–gw.spawar.navy.mil
163–4
DoN Space & Naval Warfare Systems Command
163–4 Joint Program Office
3rd Floor
2451 Crystal Drive
Arlington, VA 22254–5200

What program are you with?

Cooperative OutBoard Logistics Update (COBLU)

What is the name of your new idea, approach, process innovation, or lesson learned?

Highly-integrated IPTs and regular government/contractor management meetings

Give a description of this idea and how it fits in the program:

The IPTs for the COBLU program are highly integrated – they include anyone who may add value to the program as it progresses. The IPTs are also an official part of the program's schedule. Management meetings are held at regular intervals and aid in good communications between the government and the contractor(s).

How is it innovative and creative?

The IPTs for COBLU include whomever can add or improve the final product. For instance, contractors (whether support or prime) with a particular expertise are included, as well as lab support personnel, programmers, end users, engineers, government personnel, etc. The IPTs are part of the official program calendar, and are the primary means by which stakeholders are

made aware of pitfalls, successes, technical discussions, and the like. The management meetings may be in the form of regular QPRs, one-day meetings, or VTCs.

How has this new improvement been applied?

Please refer to question 5.

What were the results and lessons learned in developing this improvement?

The program participants are much better informed than through informal contact such as e-mails and phone conversations. The meetings are centralized and discussions are informal, increasing elicitation of inputs from all members.

What other information would help another program evaluate its applicability towards their program?

Ensure that people who can contribute to the program are added to these “universal” meetings and that the groups do not become unwieldy in their size.

IPT – COMMUNICATIONS WITH INDUSTRY

IPT – Communications with Industry

NAVSEA 703/602–1888x222 – phone
Mullarky, LCDR Anthony703/602–1608 – fax
SEAWOLF Program PMS–350 Mullarky_Anthon_J_LCDR@HQ.NAVSEA.NAVY.MIL
350A2

What program are you with?
TEAM SEAWOLF

What is the name of your new idea, approach, process innovation, or lesson learned?
"Teaming Contract Actions"

Give a description of this idea and how it fits in the program:
The SHAPM has found that the formation of "teams" to work issues is an effective way to manage issues in a timely manner. All concerned feel that it is also a cost effective method to work the issues with the varied government contractors assigned to the project. The issue has been that when time comes to form up a team, the contractors involved all want extra payment to be involved, even though common sense would say that their involvement would be a lower final cost. To prevent the added dollars when teams are formed for issues, the proposal is to contractually invoke "teaming" on all contracts when originally issued, specifically in the areas of Non-Propulsion Electronics.

How is it innovative and creative?
The contractor will have an "up-front" reason to participate and the team will not be hampered by the need to get funding in place to resolve the issue.

How has this new improvement been applied?
This has not been applied in SEAWOLF — it is recommended for others.

What were the results and lessons learned in developing this improvement?
It has been recognized that this is needed so contractors will participate "up front and early".

What other information would help another program evaluate its applicability towards their program?
N/A

IPT \Rqmt. Eval. \Advanced Technology Demo.

MARCOR 205/955–7046; DSN 645–7046 – phone
Hudson, Eugene C. 205/842–0947 – fax
Tactical Unmanned Vehicle Program Hudson_ec@fhssmtp.redstone.army.mil
N/A
Commander
U.S. Army Missile Command
ATTN: AMCPM–UG, Building 3221
Redstone Arsenal, AL 35898

What program are you with?
Unmanned Ground Vehicles/Systems Joint Project Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Vehicle Standardized Teleoperation System(VSTS)

Give a description of this idea and how it fits in the program:
The VSTS is in the form of a kit which may be applied to any standard military vehicle enabling the vehicle to be operated in an unmanned state by an operator remotely located in a safe area. The specific mission is mine clearing. M60 tanks with VSTS kits applied were used to support U.S. peace keeping operations in Bosnia during 1996.

How is it innovative and creative?
Utilizing a Small Business Innovative Research(SBIR) contract which had earlier successfully developed and tested the VSTS, UGV/S JPO was able to respond very quickly to an urgent requirement from the Office of the Deputy Chief of Staff of Operations, United States Army Europe, to produce, deliver, install, checkout, and train military operators to use the unmanned mine clearing vehicles (called Panther) in Bosnia. As result of an innovative approach to design a standardized vehicle teleoperation capability at the beginning, a great amount of time and cost were saved in responding to an urgent warfighter need. The entire process, beginning with production, installation of the kits in theater, and training operators, only took 7 months as contrasted with several years in a conventional acquisition process.

How has this new improvement been applied?
The VSTS has not only been applied to obsolete M60 tanks in the inventory, converting them to unmanned vehicles(Panthers) for use in Bosnia to clear suspected mine fields but has also been applied to D7G bulldozers, trucks and HMMWVs.

What were the results and lessons learned in developing this improvement?
Dedicated teams, in this case made up of representatives from the UGV/S JPO, the Engineering School at Ft. Leonard Wood, and Omnitech Robotics, Denver, CO, working together are capable of great accomplishments within a relative short time. Further, instead of simply designing a teleoperation kit for only one specific vehicle, designers focused on a design that could be adapted to any standard military vehicle.

What other information would help another program evaluate its applicability towards their program?
Select knowledgeable, dedicated people across all disciplines involved to accomplish difficult, urgent tasks.

JOINT PROGRAMS

Joint Programs

NAVSEA 703/602–9032 – phone
Cummins, Randall703/602–5847 – fax
MK25 Mod 1 MOM–MAGNETIC UB/MK25 MOD2 UBA ENHANCEMENT KIT
PMS340 CUMMINGS_RANDALL_S@HQ.NAVSEA.NAVY.MIL
AP2/Rm. 2010
2611 Jefferson Davis Highway
Arlington, VA 22242–5160

What program are you with?
Special Warfare Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Know all your customers.

Give a description of this idea and how it fits in the program:
Procurement contracts should include options to support all prospective users.

How is it innovative and creative?

How has this new improvement been applied?
By ensuring that all prospective users were involved Special Warfare, Army, Air Force, Marine Corps and NAVICP – the best price can be determined.

What were the results and lessons learned in developing this improvement?
Lowest possible cost per unit.

What other information would help another program evaluate its applicability towards their program?
The key is to check to see if the item you are buying has broader applicability.

JUST-IN-TIME INVENTORY

Just-In-Time Inventory

NAVAIR 703/604–2410x4863 – phone
Tang, Mike 703/604–2924 – fax
CART/CAD/AEPS TANGM@AM@NTPRS
PMA–201C4
PEO(T)/PMA–201
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
Conventional Weapons Systems: CART/CAD/AEPS (CAD/PAD).

What is the name of your new idea, approach, process innovation, or lesson learned?
CAD/PAD increased response to Fleet via new processes.

Give a description of this idea and how it fits in the program:
CART/CAD/AEPS are explosive devices used in all USN/USMC aircraft. Current regulations require fleet squadrons to requisition replacement CART/CAD/AEPS through their supporting station or ship's weapons department 120 days before actual need. The weapons department then consolidates requirements for like items from each of its tenant activities. The current process requires the weapons department to submit (90 days in advance of need) a batch requisition to Naval Ordnance Center Inventory Management Division (NOC–IMSD). The objective is to reduce lead time and cost in delivering assets to the fleet by establishing direct access between squadrons and inventory control points.

How is it innovative and creative?
It restructures requisition system by marrying the best of government and commercial support practices. Currently, customers must order months before actual usage. This results in stocking expensive, life-limited parts in an attempt to ensure they will be in the correct location when needed. It is more cost effective to reduce inventory levels to a few days supply. With modern telecommunications and distribution systems to move assets, we can move assets just-in-time for usage. This innovation significantly reduces investment in spare parts as well as eliminating current labor intensive shipping processes.

How has this new improvement been applied?
This new improvement has proven successful by private industry and a handful of DOD programs. While the current system measures delivery time in months, the new improvement guarantees delivery in days. We are on target for application.

What were the results and lessons learned in developing this improvement?
After working with all involved members, various automated software have been developed. It is important to have buy-in from all members to ensure successful application.

What other information would help another program evaluate its applicability towards their program?
A major benefit of systems thinking is the ability to provide consistent understanding of the current process. This improved systems understanding leads to a more thorough analysis of support systems, their modeling design and implementation decisions. A structured approach benefits improved performance in both near and long term activities.

LECP

LECP

NAVAIR 703/604–2600x7019 – phone
Massenburg, CAPT Wally 703/604–2425 – fax
PEO(A), Maritime Surveillance Aircraft Program Office
PMA–290 MASSENBURGWB.NTRPRS@NAVAIR.NAVY.MIL
1421 Jefferson Davis Highway
Arlington, VA 22243–5120

What program are you with?
Maritime Surveillance Aircraft Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Logistic Engineering Change Proposal (LECP) Success Story: Replacement Inertial Navagaton Unit (RINU) for the P–3C Aircraft

Give a description of this idea and how it fits in the program:
The LECP program, an element of the NAVICP BOSS III program, is designed to promote Reliability, Maintainability, and Supportability (RM&S) improvements to decrease logistics support cost. A "partnership" LECP program, the Replacement Inertial Navigation Unit (RINU), was designed to address low fleet readiness and high maintenance support cost. The LTN–72 is an aging spinning mass technology INU currently installed on roughly 273 P–3 aircraft. The INU has low MTBF (<200hrs) with nearly 1,000 repairs required annually at a cost of $10K each. The unit is a safety of flight critical system degrading fleet aircraft readiness. The RINU program will include: MTBF of 4500 hrs, embedded GPS capability, guaranteed warranty of 15 yrs from last delivery (roughly 20 yrs total). The LTN–72 is the number one AVDLR cost driver for the P–3 Fleet costing nearly $9M in annual repair costs.

How is it innovative and creative?
Until RINU, the LECP program was primarily used for replacing low cost repair items. Using the LECP program to replace the LTN–72 was a more ambitious application. RINU is new, higher reliability technology and did not lend itself for a one to one buy-in buy-out procurement. In June 1995, the RINU program was structured in accordance with NAVICP BOSS III LECP payback criteria. Even though a change in LECP implementation put the RINU program execution in jeopardy, the RINU Team recognized the fleet need for a more reliable INS and pushed to initiate the RINU program. PMA–290 provided program funding ($600K/APN–5) to allow the NAVICP contract to be awarded in September 1996 for procurement of the Engineering Design Models (EDMs) and, NAVICP released the Non-recurring Engineering (NRE) funds in October 1996 to start the RINU program.

How has this new improvement been applied?
While the fleet need for a more reliable INS had been demonstrated and the savings in costs to repair LTN–72s would exceed $9M per year, funding the remainder of the RINU program remained an issue. However, after examining many funding profiles, the RINU team has devised a program that meets the LECP requirements, has minimal impact to the fleet, and will allow RINU procurement (42 systems) to commence in FY–97 with installation starting in FY–98. The implementation of this LECP has been made possible as follows:

- Non-recurring cost payback will occur through a fleet tax or “surcharge”.

- Recurring cost for the A–Kit, B–Kit, and installation are paid back to NAVICP through AVDLR savings when the LTN–72 is replaced.

- PBD–714 funding from OSD has been made available to off-set fleet contributions for the buy-in buy-out requirement of an LECP.

What were the results and lessons learned in developing this improvement?

Through innovative application of the LECP policy, NAVICP has been able to provide the fleet great benefits with the RINU BOSS III initiative. Executing the RINU program has the potential to save the Navy approximately $287M over the warranty life of the program. Fleet functional wings (COMPATWINGSLANT, COMPATWINGSPAC, and COMNAVAIRESFOR) actively endorse programs such as RINU as a cost effective, reliable, state-of-the-art solution for replacing old, high failure rate systems.

What other information would help another program evaluate its applicability towards their program?

LIFE CYCLE COST

Life Cycle Cost

SSP 703/607–0561 – phone
Meserole, Marc 703/607–2233 – fax
TRIDENT SP201@ssp.navy.mil
SP 201
1931 Jefferson Davis Hwy.
Arlington, VA 22202–3518

What program are you with?
The TRIDENT Strategic Weapons System (SWS) program managed by Director, Strategic Systems Programs (SSP)

What is the name of your new idea, approach, process innovation, or lesson learned?
Outsourcing Life Cycle Support (LCS)

Give a description of this idea and how it fits in the program:
Instead of transitioning to organic support after deployment, Government retains only essential functions and outsources other support elements to the contractor who executed the design. This approach is consistent with DoD 5000.2–R direction and leverages a Government-industry team relationship that is implemented by performance-based contracting. Disciplines outsourced include but are not limited to configuration management, inventory management, repair, calibration, problem solving, and disposal. Within the TRIDENT program, the specific functions outsourced vary somewhat from subsystem to subsystem. However, each subsystem contractor is motivated toward long term program success by tradition of participation in the program, by continued business outlook, and/or by contract incentives that reward successful performance of the system in the fleet, cost savings and conformance to schedule.

How is it innovative and creative?
It encourages a Government – industry team relationship wherein the Government and the contractor mutually adopt a long-term view. This total program focus is motivated by continuing involvement of both the program office and the contractor through the various program phases so that it is clear to participants that they will live with the decisions they make. Outsourcing has the additional benefit of fostering program stability and of applying the associated continuity of personnel to development of improvements and efficiencies.

How has this new improvement been applied?
This approach has been implemented successfully across the TRIDENT SWS, with 86 percent of LCS outsourced. It has enabled accommodation to realities of downsizing and to the necessity of achieving Life Cycle Cost (LCC) economies. The long term view has been an important factor in the controlled introduction of performance risk that thus far has not been accompanied by performance degradation.

What were the results and lessons learned in developing this improvement?
The prime result is the contribution to the continued exemplary performance of the TRIDENT SWS in the presence of decreasing funding and reductions in personnel. Lessons learned apply principally to the relationship between Government and Industry, a relationship that must exhibit specific characteristics for the approach to succeed. These include mutual trust and respect, common understanding of the effects of Government decisions on business and of business decisions on the program, and common focus across the workforce on long-term program success.

What other information would help another program evaluate its applicability towards their program?

The first consideration is the phase the program is executing. The benefits of LCS outsourcing is greatest when the approach is established and understood before the start of design. It is most difficult to implement if the Engineering and Manufacturing Development contractor is no longer participating in the program. A second factor is the degree of parochialism that is inherent in the infrastructure and how much of an impediment it introduces. In the vernacular, "rice bowls" may be difficult to address. The degree of unique military requirements is another important factor to consider.

Life Cycle Cost

SPAWAR 703/602–4433 – phone
Sherman, LCDR Kevin 703/602–5327 – fax
CHBDL–ST shermank@smtp–gw.spawar.navy.mil
PMW 163–3B

What program are you with?
CHBDL–ST

What is the name of your new idea, approach, process innovation, or lesson learned?
Vanishing Vendor/Parts Inventory Checks

Give a description of this idea and how it fits in the program:
Using a government database to validate that parts which are no longer manufactured, have no equivalent and are not available, and therefore must be replaced with a redesign.

How is it innovative and creative?
Validates the requirement for expensive engineering redesign of system components.

How has this new improvement been applied?
During negotiation for the CHBDL production contract.

What were the results and lessons learned in developing this improvement?
During negotiations for the CHBDL production options, Lockheed Martin claimed the need for a $1.2M firm fixed price redesign effort to replace 56 parts which are no longer manufactured. A government data base revealed that of the first 22 parts searched, 19 were available from a distributor who still had the parts in inventory in large enough numbers to meet the programs inventory objective. This resulted in a reduction in costs to $800K and a change to a Cost Plus contract which may result in further savings if some of the 34 remaining parts are identified as being in government or distributor inventories.

What other information would help another program evaluate its applicability towards their program?
Anywhere that Mil–Std parts are being replaced in industry by commercial parts, resulting in obsolete parts for future production runs.

Life Cycle Cost

SPAWAR 703/602–7529 – phone
Ziegler, CDR Mike 703/602–1479 – fax
Joint Maritime Communications System, UHF SATCOM zieglerm@smtp–gw.spawar.navy.mil
176–4
SPAWAR

What program are you with?
Joint Maritime Communications System

What is the name of your new idea, approach, process innovation, or lesson learned?
Afloat Telecommunications Service Commercial Contract

Give a description of this idea and how it fits in the program:
This idea is in response to the Commercial SATCOM ORD which requires a series of communications terminals from low to high data rate. The idea is the use of service contracts to provide hardware, satellite communications services, and technical support for afloat telecommunications.

How is it innovative and creative?
Establishes a commercial vendor shipboard presence to offer commercial frequency band satellite telecommunications service to ships at sea. Provides bulk capacity, voice, FAX, data, STU III and, ISDN capability for official and other communications requirements at a cost less than INMARSAT. Also innovative is the teaming approach taken with Navy Exchange Command who will provide personal unofficial services through this service connectivity.

Although this approach had been used by NEXCOM in providing sailor phone services to selected ships, this is the first time this approach has been taken to provide official services to all surface ships.

How has this new improvement been applied?
The contract is still in the presolicitation phase. RFP release and contract award are planned for Spring/Summer 97.

What were the results and lessons learned in developing this improvement?
When fully implemented the system will have saved $60 million in up front procurement and installation costs and $37 million in connectivity costs

What other information would help another program evaluate its applicability towards their program?

Life Cycle Cost

NAVSEA 703/418–6074 – phone
Gauthier, Capt. Maurice 703/418–2527 – fax
LPD 17 Amphibious Transport Dock Ship Program gauthier_maurice@hq.navsea.navy.mil
PMS 317
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?
LPD 17 Amphibious Transport Dock Ship Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of Full Service Contractor to create Total Ownership Cost (TOC) Prediction Model

Give a description of this idea and how it fits in the program:
TEAM 17 procurement has required the Full Service Contractor to create a TOC prediction model and measurement tool in order to shift management focus from Estimate at Completion (EAC) to Estimate at Disposal (EAD). This tool will be matured in LPD 17 and hopefully adopted by other NAVSEA shipbuilding programs as a best practice.

How is it innovative and creative?

How has this new improvement been applied?
What were the results and lessons learned in developing this improvement?

What other information would help another program evaluate its applicability towards their program?

Life Cycle Cost

SPAWAR 703/602–4433 – phone
Sherman, LCDR K. 703/602–5327 – fax
BGPHES ARS–ST shermank@smtp–gw.spawar.navy.mil
PMW 163–3B

What program are you with?
Battle Group Passive Horizon Extension System Acquisition Receiving Subsystem – Surface Terminal (BGPHES ARS–ST)

What is the name of your new idea, approach, process innovation, or lesson learned?
A Government Activity (NISE–East) is building the production system (there is no prime contractor).

Give a description of this idea and how it fits in the program:
The Navy Command, Control, and Ocean Surveillance Center In Service Engineering Division, East Coast (NISE–East) is procuring components, assembling and integrating production systems, and installing them on ships in accordance with the baseline documentation and guidance from the prime system developer (Raytheon E–Systems/Falls Church Division).

How is it innovative and creative?
Government personnel and production facilities will be used instead of contractor ones. This reduces production costs and ensures a substantial Government knowledge base so that the system can continue to be improved and maintained by Government personnel.

How has this new improvement been applied?
Beginning with the full-rate production effort this FY, NISE–East is assembling the mostly-COTS system using E–Systems personnel as a technical resource as necessary. BGPHES P3I requirements are being used to encourage the contractor to retain the engineering team, to develop system improvements, to keep up with the changing threat, and to take advantage of improving commercial technologies.

What were the results and lessons learned in developing this improvement?
The results are dramatically reduced production costs, Government ownership of the system production design, and increased experience for the In-Service Engineering Agent (ISEA), NISE–East.
What other information would help another program evaluate its applicability towards their program?
The keys to making this strategy work are: (1) availability of in house government production facilities and qualified technical personnel and (2) a cooperative team effort between government and prime contractor (system developer). NISE–East and E–Systems have been on the same team for years and routinely consult each other for technical advice.

LOGISTICS SUPPORT

Logistics Support

NAVAIR 703/604–1002x3949 – phone
Traaen, CDR (SEL) Thomas 703/604–1278 – fax
TOMAHAWK Command and Control Traaen@lan–email.peocu.navy.mil
PMA–281
Crystal Gateway #4
Room 618
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
The Program Executive Officer, Cruise Missiles and Joint Unmanned Aerial Vehicles (PEO(CU)), Command and Control Program Office (PMA–281)–APS/TMPC/JSIPS–N.

What is the name of your new idea, approach, process innovation, or lesson learned?
Providing logistics supportability to TOMAHAWK Land Attack Missile (TLAM) afloat and ashore mission planning centers through privatization.

Give a description of this idea and how it fits in the program:
PMA–281 produces the hardware and software products that provide the capability to plan, disseminate and validate TOMAHAWK missions both ashore and afloat. The Afloat Planning System (APS) provides conventional TOMAHAWK Land Attack Missile (TLAM) planning capabilities across the Fleet by migrating software to downsized Commercial Off the Shelf / Nondevelopmental Items (COTS/NDI) computer hardware on Aircraft Carriers. Additionally PMA–281 manages the COTS/NDI based Joint Service Imagery Processing System-Navy (JSIPS–N) which provides very near real time national and tactical imagery products to Aircraft Carriers, Amphibious Assault ships and Flagships to improve battlegroup tactical flexibility and responsiveness, and to enhance wartime utility of intelligence and of Precision Guided Munitions (PGM). The Cruise Missile Support Activities (CMSA) provide the TLAM planning capabilities ashore at CINCUSACOM and CINCUSPACOM.

In January of 1996 PMA–281 declared permanent interim support for the APS and JSIPS–N. The Program Office was in the process of trying to establish traditional Navy logistics supportability through the Navy's Inventory Control Point (NICP), but through mutual agreement with the NICP broke ranks due to the unique logistics requirements of COTS/NDI equipment. With no discernible other means of providing logistics support to both afloat and ashore operational customers, the Program Office teamed with the Defense Logistics Agency (DLA) and Federal Express (FEDEX) to build a logistics support system that fits the needs of PMA–281 customers and that will lead the logistics community into the 21st century. To date, this system has proven that material readiness can be not only maintained, but increased at a significantly reduced cost by leveraging off of best commercial practices.

Operating Procedures

- Inventory is maintained at the FEDEX facility in Memphis, TN.

- The ship or ashore facility maintains a Pack Up Kit (PUK) designed to eliminate single point failures.

- The customers use e-mail via the internet to transmit parts requests to the FEDEX warehouse. Once the request is received warehouse personnel acknowledge receipt of the request and provide the Air Way Bill (AWB) numbers to the customer. Using the AWB the customer then maintains complete in transit visibility while material is in transit. In FY 97 this system will be replaced and ordering will occur using a catalog maintained on the FEDEX World Wide Web home page.

- Shipments are made in reusable containers using FEDEX air shipments. These containers are used to return Depot Level Repairables (DLR) to the appropriate commercial repair depots. FEDEX also provides prepaid return shipping labels with each shipment of a DLR to ensure expeditious return to the depot.

- The World Wide Web or the FEDEX provided software tracking package is used to track shipments while in transit.

- The In Service Engineering Agent (ISEA) as well as the Original Equipment Manufacturer (OEM) maintain on line access to the inventory maintained in Memphis. Stock replenishment is accomplished on a Just In Time (JIT) basis.

- Depot repair facilities have been moved from a Defense Mapping Agency (DMA) facility to the OEM to leverage off of factory Test Program Sets (TPS) thus increasing cost avoidance figures and further reducing lengthy repair turn around times.

How is it innovative and creative?

The objective of the FEDEX logistics system is to maintain or increase material readiness while at the same time reducing the cost of logistics. This objective can be achieved by reducing the size of the inventory while at the same time reducing the logistics response time to the customer. This objective has been met. During the most recent deployment of the USS Carl Vinson (CVN–70) to the Pacific and Indian oceans, the first ever deployment using this concept, material readiness for the APS and JSIPS–N common systems was recorded in excess of 96 percent. The average transit time for material being requested by the ship was six and one half days (compared to the Navy published delivery time frame of 32 days). Similar time reductions have been met for the ashore systems as well. The ship was originally scheduled to deploy with a range of 237 and a depth of 535 piece parts costing over $1,000,000. The Carl Vinson actually deployed with a PUK that included 40 piece parts with an associated dollar value of $195,818. Overall cost avoidance incurred to date for the FEDEX based logistics system is $12,680,000. A summary of these avoidance's is provided in question seven.

How has this new improvement been applied?

A total of 23 afloat customers and six ashore mission planning facilities will be supported using this system. Currently there are nine afloat users and six ashore customers that are using this system. The total inventory of 3,042 parts are maintained in a Government Owned, Contractor Operated (GOCO) facility that is collocated with the main FEDEX transportation hub in Memphis, TN. By contract, FEDEX is required to maintain inventory validity at a minimum of 99 percent. DLA wrote and administers the contract with FEDEX. To DOD customers this FEDEX logistics system is called Premium Service. FEDEX has been providing this same service to the commercial sector through their Parts Bank Facility for in excess of 15 years.

What were the results and lessons learned in developing this improvement?

Results

Afloat on site inventory reduced from a range of 237 and a depth of 535 items worth $1,000,000.00 to 40 items worth $195,818.09. Reductions to shore based inventories are similar in magnitude. Over all cost avoided, $12.7 million.

Cost Avoidance Detail

The following is a break down of the cost avoidance realized to date using the FEDEX logistics system;

		FEDEX Premium Service	Traditional Logistic Support	Avoidan
Inventory Cost	$31,858.92	$36,723.40		
Transportation	$ 2,257.99	$ 1,757.99		
Total		$34,116.91	$38,481.39	
Piece Part Cost	$3,779,020.00	$9,000,000.00		
JIT STK Replen	N/A	$ 154,000.00		
Total	$3,779,020.00	$9,154,000.00		
Avoidance per Deployment (1)	$500,000.00	$500,000.00		
Depot Transfer (2)	$6,805,020.00			
TPS Procurement (3)	($ 385,000.00)			
Total	$6,420,020.00	$6,420,020.00		
Total Avoidance	$12,680,000.00			

Cost avoidance figures do not reflect value added elements provided by FEDEX such as, material tracking, total asset visibility, packaging and preservation, packaging certification and money back guarantees.

Notes

(1) USS Carl Vinson (CVN–70) represents the only completed APS/JSIPS–N deployment to date. Currently, USS Theodore Roosevelt (CVN–71) is on the second deployment using the FEDEX logistics system.

(2) Represents cost avoidance achieved by moving from an organic repair depot maintained by the DMA to the contractors facility in San Diego. This move allowed the Program Office to leverage off of existing factory TPS's vice having to procure and outfit the DMA depot.

(3) Represents cost incurred to modify factory TPS's for repair purposes

Using the FEDEX logistics system the average delivery time to a deployed customer is 6.8 days, average delivery time to an ashore customer is 24 hours. These statistics should be compared to Navy published delivery time frames of 32 days to deployed units and 16 days to shore based facilities.

Deployed systems achieved readiness figures of 95.3% for the Digital Imagery Workstation Afloat (DIWSA) and 97.3% for Tactical Series based computer systems.

Lessons Learned

Continue to use the FEDEX Logistics system to support systems deployed to the fleet. The concept is a reality and saves dollars. The FEDEX Logistic system that is now in place to support TLAM mission planning centers both ashore and afloat brings to the forefront a revolutionary logistics system poised to fundamentally change the way that the Department of Defense conducts business and is a tip of the spear concept ready to lead the DOD into the future. Beyond being a concept, this system leverages heavily off of best commercial practices that have long been in place. The result of using this system are significantly reduced cost and increased readiness.

What other information would help another program evaluate its applicability towards their program?

Programs need to look at systems that are going to be supported in an interim fashion, that are COTS/NDI in nature, that are high dollar value and were a shared resource can be centrally managed to reduce cost and maintain readiness.

MANAGEMENT INFORMATION SYSTEMS

Management Information Systems

NAVAIR 703/604–2410x4889 – phone
Hammersley, Bill 703–604–2990 – fax
JSOW Unitary Variant, AGM–154C hammersleywf.ntrprs@navair.navy.mil
PMA–201
PEO(T)/PMA–201
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
Joint Stand-Off Weapon (JSOW) Unitary Variant, AGM–154C

What is the name of your new idea, approach, process innovation, or lesson learned?
JSOW Unitary Management Information System (MIS) and Technical Data Library (TDL)

Give a description of this idea and how it fits in the program:
The JSOW Unitary MIS is used to help manage the cost, schedule, and technical metrics of the program, as well as program risk data. The system is used by the prime contractor to plan and execute the program, and is shared with the Program Office. The system that resides in the PMA is identical to that being used by the contractor. It allows the PMA to have tremendous insight into the program with fewer people and without overburdening the contractor's resources to provide the Government detailed cost, schedule, and technical information.

JSOW Unitary TDL is located on a World Wide Web (WWW) server which is protected using modern encryption technology. The TDL contains all unclassified technical studies, reports, and deliverables generated by the program. Both the contractor and Government project personnel use this site as their primary repository of technical data for the program, allowing anyone to share their data with anyone else on the program.

How is it innovative and creative?
The MIS allows the following improvements which result in 36% percent improvement of cost performance report delivery cycle-times, 33% percent less time spent tracking cost and schedule, and a government staff one half of traditional programs:

- Twice a month "paperless" cost and schedule reviews using the MIS
- Electronic submittals of cost performance reports
- On-line updates of variance explanations and access to project cost and schedule data
- Automated actuals and performance updates for the cost and schedule tracking systems

Where applicable, the TDL allows the contractor to deliver all program deliverables, as well as supporting studies and reports, in an efficient and cost effective manner. Both contractor and Government project personnel have immediate access to pertinent data when necessary.

How has this new improvement been applied?
Automating the updating process for cost/schedule performance and actuals was the most significant improvement. This allows contractor managers to receive cost and schedule performance data earlier every month. Variance explanations are subsequently entered online. Variances, schedule progress, and associated technical and risk information are all then reviewed in a "paperless" bi-monthly (i.e. twice a month) Cost/Schedule Review using the MIS. The PMA also attends theses reviews.

The MIS also allows the contractor program managers to communicate to their work-force program goals more effectively. Lower level managers also use the MIS to track technical metrics for their portions of the program, as well as constantly monitor other "pieces" to ensure concurrence. All of these elements together provide the PMA and the contractor with more timely information than was ever available before, without overtaxing the contractor.

The scalability and flexibility of the MIS allowed it to be easily adapted to the ERGM program (a NAVSEA program). This program was also highly streamlined and was looking for cost savings in all areas. For program control, the MIS has met the ERGM program's cost and reporting requirements. The MIS is also being widely disseminated at The Systems Group of Texas Instruments.

The TDL has allowed an improved method of exchanging ideas between contractor and Government teams. It allows Government personnel to be better informed when attending technical meetings, or when reviewing contractor deliverables. Review comments are subsequently returned in a timely manner. The secure server environment allows safe communication between geographically diverse locations.

What were the results and lessons learned in developing this improvement?

The primary improvement is the significant reduction in cycle-time (10 day or 36% improvement) for providing cost and schedule reports to the Government, while still meeting all of the C/SCS requirements.

It was realized early on that if we ensured that the system met the needs of the contractor managers for cost, schedule and technical management, the Government requirements for program insight will also be satisfied. These requirements, however, still need to be communicated and reinforced regularly.

The PMA worked with the contractor from the very beginning to ensure that the whole team's needs were met.

When combining the information resources available via the MIS and the TDL, anyone on the program can easily access all of the information they need to effectively manage the program, identify and resolve issues.

What other information would help another program evaluate its applicability towards their program?

The PMA worked hard with the contractor to ensure that the following requirements were met by the MIS;

1. the system is accurate – it reflects actual program execution.
2. The system is timely – it reflects current program status, i.e. no 4 – 6 week lags between program status and what the MIS actually conveys.
3. The system is usable – the system can easily be used by program personnel, i.e. it is not so cumbersome that no one is willing to use it.

The accuracy requirement is the most important. We ensured this by requiring that the schedule database and cost database both reflect the same milestones. We use a database tool to check that the two databases are tracking the same information every month.

Management Information Systems

NAVSEA 703/604–6052x544 – phone
Beard, Mr. Jeff 703/602–6054 – fax
The Long-term Mine Reconnaissance System (LMRS) Beard_Jeffrey@hq.navsea.navy.mil

PMS403
2011 Crystal Drive
CPk 1, Room 817
Arlington, VA 22242–5169

What program are you with?
The Long-term Mine Reconnaissance System (LMRS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of an Electronic Technical Information Center

Give a description of this idea and how it fits in the program:
An Electronic Technical Information Center (ETIC) is a program specific electronic library that resides on the Internet. An ETIC is an easy method to release technical and program information to industry while maintaining a fair and competitive environment.

How is it innovative and creative?
The LMRS was one of the first NAVSEA programs to establish an electronic library for the dissemination of program information. This process reduced reproduction costs, decreased industry's travel costs, and increased the availability of information to industry. All these advantages were realized using a commercially developed communication link, the Internet.

How has this new improvement been applied?
The LMRS ETIC was designed and used to improve the competitive source selection process by increasing industry's knowledge of the LMRS technical and program requirements. Releasing the information on the Internet increased the information available to industry, while maintaining the fair competitive nature of the acquisition. The increased information improved industry's knowledge of the LMRS Program. The increased knowledge improved the competition and the resulting system design.

What were the results and lessons learned in developing this improvement?
The ETIC resulted in an increase in the volume of information available to industry, while maintain a competitive environment. The increased information resulted in improved proposals and a better competition, and a better system design.

Lessons learned in developing the ETIC were:

a) Ensure you have the required technical support. Placing information on the Internet requires special knowledge in preparing and maintain an Internet homepage, as well as knowledge in converting documents to hypertext format for release on the web.
b) Plan ahead. Like all new process establishing and maintaining an ETIC is a learning process. Planning ahead reduces the time delay in establishing and maintaining an ETIC.
c) Remain flexible in your data format. There are at least two formats for release data on the Internet, converting the document to an Internet format or releasing the document in a file transfer protocol format. Releasing information in an Internet format allows viewers to read the document directly on the Internet with no additional software. This provides the reader quick and easy access, but converting the document is sometimes difficult and time consuming. Releasing the document in a file transfer protocol simplifies release, but requires the reader to download the document exit the Internet and read the document in the original software format. There is no signal correct format, review each document you release and select the best method for the document.
d) Make it easy to identify what is new. The ETIC may become a large database, it will assist the reader if they can quickly identify what was recently added to the ETIC.
e) Security is important, always remember that any information released on the Internet is accessible worldwide by everyone. There are two security issues of concern, first, releasing classified

information, and second, releasing unclassified but sensitive information. Prior to releasing any information on the web, it should be reviewed in accordance with the program's security classification guideline to ensure all information is unclassified.

Identifying sensitive information is not as easy as identifying classified data. Each document should be reviewed to determine if, even though it is unclassified, it should be released to the public. If the document was generated by another program office, clear the release of the information with them prior to releasing the document on the ETIC. Another good idea is to coordinate with the security office. The security office has identified specific information and documents that they consider sensitive. One example of sensitive information is a program's security classification guidelines. These guides are exempt from the freedom of information act and should not be released to the public. When preparing to release a document, remember the security office has the authority to remove anything they considered classified or sensitive from the Internet. Coordinating with the security office prior to releasing a questionable document can avoid significant work and problems after release.

f) When announcing an ETIC to industry, provide specific guidance on how to access the ETIC. We "opened" our ETIC with an announcement in the Commerce Business Daily. In the announcement we provided step by step instructions on how to access the ETIC, and still we received several questions on how to access the ETIC, or how to download from the ETIC.

What other information would help another program evaluate its applicability towards their program?

Anyone interested in developing an ETIC should review the format of the information they wish to release. For easy conversion, most of the information should be available in an electronic format. Scanning significant volumes of information to facilitate release may not be cost effective.

Consider the level of competition. An ETIC is accessible by all of industry, and therefore, is very well suited for full and open competition. If you are in a limited competition or sole source it may be easier, and more cost effective to use a different electronic media for communications.

Consider the security requirements of the program. If much of the information is sensitive and can not be released to the general public the ETIC will not be successful.

Choose your server carefully. The server will require significant maintenance and support. We selected a server that was already dedicated to supporting electronic contracting activities, this allowed us to share the support requirements and reduced the overall support costs.

Management Information Systems

MARCOR 703/784–2255x8062 (DSN 278–) – phone
Chamberlain, Capt Thomas J.703/784–5618 (DSN 278) – fax
Program Management Plan Automation chamberlaint@mqg–smtp3.usmc.mil
C4I/P–PMPA
2033 Barnett Ave.
Quantico, VA 22134

What program are you with?

Plans and Operations Section, Directorate Staff, C4I, MARCORSYSCOM

What is the name of your new idea, approach, process innovation, or lesson learned?

Program Management Plan Automation

Give a description of this idea and how it fits in the program:

By creating a Lotus Notes database of project specific 'objects' (i.e. graphic, description, funding profile, support documents, personnel assigned, etc.), various views can be provided to many different requesters in the format of their choosing. Creating this database will allow program managers at all levels of the command the opportunity to quickly and efficiently review (and if necessary, redirect) the progression of each project through the acquisition process. A single change in the information contained within the database affects each view thereby reducing confusion and wasted time deciphering which set of data is most accurate.

How is it innovative and creative?

This automation uses emerging database and document storage and retrieval management tools and techniques to reduce project officer data input, manipulation, and presentation. It allows for various levels of review and concurrence. Certification is being built in to reduce necessary paper copies and provide for faster, more efficient review and approval of management plans.

How has this new improvement been applied?

Previous efforts have enabled the staff elements to consolidate and manipulate data files for review and publication. This improvement will extend the reach of that effort to the project officer and tremendously improve the efficiency of information input, presentation, analysis, retrieval, and storage.

What were the results and lessons learned in developing this improvement?

This improvement is using existing software tools on existing data files within current processes. The education process of the capabilities of these tools is far short of what is needed to take full advantage of the capabilities and investment made into Lotus Notes. An explosion of ideas on connectivity and interoperability is expected as the learning takes place.

What other information would help another program evaluate its applicability towards their program?

A brief introduction to systems management and analysis would be helpful in evaluating the applicability of Lotus Notes to a particular program or process. Understanding the process clearly and identifying elements and workflow would assist in determining the suitability of this program for other needs.

Management Information Systems

NAVSEA 703/602–3143x110 – phone
Hansen, Mr. Lynn 703/602–2172 – fax
NSSN C3I (Sonar, Combat Control, and Architecture subsystems)
PSM401 Hanson_Lynn_L@HQ.NAVSEA.NAVY.MIL
PEO SUBS/PMS401
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?

New Attack Submarine (NSSN) Command, Control, Communications, and Intelligence (C^3I)

What is the name of your new idea, approach, process innovation, or lesson learned?

Integrated Data Environment (IDE)/Contractor Integrated Technical Information System (CITIS) Integrated Product Team (IPT)

Give a description of this idea and how it fits in the program:

The purpose of this IPT is to facilitate access to needed program data to all program participants in timely and cost effective manner.

How is it innovative and creative?

* Internet Web site provides rapid desktop access to contractor and Navy information
* Joint contractors/Navy IPT supporting multiple programs
* COTS solution

How has this new improvement been applied?

* Latest Interface Control Documentation (in-process, baselined, proposed changes) for 17 NSSN subsystems used across Commands and contractors
* Electronic delivery of CDRLs and other program information for NSSN C^3I, Acoustic – Rapid COTS Insertion (A–RCI), and Wide Aperture Array (WAA)
* Over 300 users and growing
* Fleet access to selected data for fleet systems/updates planned

What were the results and lessons learned in developing this improvement?

* Web browser overcomes disparate development environments and legacy documentation
* Use of Portable Document Format (PDF) enables desktop viewing of legacy data including drawings
* Eight times magnification of drawings with Adobe Acrobat Reader a big plus
* Desktop user cost and training need negligible as most users already have browsers/internet access

What other information would help another program evaluate its applicability towards their program?

Solution provides security for sensitive unclassified information.

Management Information Systems

SPAWAR 703/602–2457 – phone
Thornton, John 703/602–0123 – fax
Advanced Deployable Systems (ADS) thorntoj@smtp–gw.spawar.navy.mil
SPAWAR PMW 183
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?

Advanced Deployable System (ADS), SPAWAR PMW 183

What is the name of your new idea, approach, process innovation, or lesson learned?

Electronic Data Delivery and Storage

Give a description of this idea and how it fits in the program:

The Underwater Segment of the Advanced Deployable System (ADS) program has used the Lotus Notes software package as the repository and delivery vehicle for data on the system development. Specifications, decisions and rationale, and other various technical and administrative data items are stored in Lotus Notes databases. These databases are then replicated to the required locations fore local access, including the prime contractor's site, the major subcontractor's site, the program office, a support contractor's site, and the major Navy laboratory site. Other sites being added

include the in-service engineering site and a logistics support contractor's site. The security built into Lotus Notes allows access at appropriate levels for those needing access to the data and does not allow access to those who do not.

How is it innovative and creative?

This electronic delivery of data allows local electronic access to data and prevents the prime contractor from having to produce paper deliveries to the Government. It also provides consistent information to all sites, ensuring that the latest data is available. This also promotes communications by allowing comments on data to be reviewed at all sites.

How has this new improvement been applied?

This improvement has been applied using the existing Lotus Notes capability at SPAWAR and developing Lotus Notes capabilities at other sites.

What were the results and lessons learned in developing this improvement?

The results are that there is local access to ADS data at the appropriate sites, this data is current and controlled, and that there are no paper deliveries to data to the Government.

The first lesson learned is that replication and local security issues need to be worked out early in the process. One site would not allow replication over modems, as they were perceived as information security risks. Another site would not allow replication over the Internet, as it was perceived as a security risk.

The second lesson learned is that access control lists (ACLs) for databases are not trivial to establish and maintain. ACL control procedures need to be established up front and whether central control of access is desired or access delegated to the local site administrator.

The third lesson is that Lotus Notes applications are implemented on an electronic mail backbone. Some organizations are staunchly opposed to allowing its use, since there is already a single electronic mail application defined for the organization. This limits the payoff from being able to fully exploit the capabilities of the Lotus Notes tool.

What other information would help another program evaluate its applicability towards their program?

With the expanding use of Integrated Product Teams for system developments, geographically diverse and organizationally diverse team members are becoming more common. The need for local (high speed) access to data that is current and controlled is a requirement for many system developments. The use of Lotus Notes as a repository for this data is a potential solution for this requirement.

MANUFACTURING PROCESSES

Manufacturing Processes

NAVAIR 703/604–2440x5213 – phone
Smith, Ms. Barbara 703/604–2784 – fax
V–22 SMITHBJ@AM@NTRPRS
PMA–275D
JP#2, Room 322

What program are you with?
V–22

What is the name of your new idea, approach, process innovation, or lesson learned?
Rate Insensitive Manufacturing

Give a description of this idea and how it fits in the program:
Manufacturing processes and planning which are not as sensitive to cost as "normal" processes. Required because of low production rates and declining budget, with possibility that planned rate would be reduced.

How is it innovative and creative?
Required starting with a "clean floor" and a new way of thinking about work and material flow, tool and aircraft design, etc.

How has this new improvement been applied?
Prime contractors have met the challenge. The key was in determining which parts were most susceptible to the process change.

What were the results and lessons learned in developing this improvement?

1) Does not apply equally to all parts/processes
2) Expectation was that the process would still yield big savings if production quantity increased – not so.

What other information would help another program evaluate its applicability towards their program?
Briefing on process and metrics used in determining success.

MULTINATIONAL DEVELOPMENT

Multinational Development

SPAWAR 703/602–7469 – phone
Westhoff, Mr. Jim703/602–6415 – fax
COBLU westhofj@smtp–gw.spawar.navy.mil
163–4
DoN Space & Naval Warfare Systems Command
163–4 Joint Program Office
3rd Floor
2451 Crystal Drive
Arlington, VA 22254–5200

What program are you with?
Cooperative OutBoard Logistics Update (COBLU)

What is the name of your new idea, approach, process innovation, or lesson learned?
Joint Program/Project Development

Give a description of this idea and how it fits in the program:
This USN required the modification of an existing platform, OUTBOARD, currently in use aboard US ships. After the requirement for an update to the system was finalized, joint development of the program was discussed with and approved by the United Kingdom. The UK now participates in the program's funding and management in pursuit of a common system for both nations.

How is it innovative and creative?
Development and financing of this program occurs across national boundaries, whereas, many other programs are confined to development within a service or across services.

How has this new improvement been applied?
Development of the COBLU system has occurred using funds from the US and UK in fulfillment of a common goal. A single contract is awarded after agreement on the system's necessary requirements, and the program is monitored jointly.

What were the results and lessons learned in developing this improvement?
The primary lesson learned is that inclusion of a second nation with commensurate program needs can greatly reduce development costs. (COBLU witnessed and estimated 40% reduction in development costs). Increased unit production could also result in per unit cost savings. Additionally, cooperation with the United Kingdom improves the exchange of expertise and ideas, thereby improving the system, and ultimately US–UK relations.

What other information would help another program evaluate its applicability towards their program?
N/A

Multinational Development

NAVSEA 703/602–0924x102 – phone
Riley, Michael 703/602–1879 – fax
CLDG riley_michael@hq.navsea.navy.mil
PMS–MDS
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5160

What program are you with?
Closed Loop Degaussing (CLDG) for MCM–1 class, ACAT IVT

What is the name of your new idea, approach, process innovation, or lesson learned?
Teamwork with foreign partners.

Give a description of this idea and how it fits in the program:
CLDG is a joint R&D program with France. The US had problems with obtaining system components (the US contractor could not deliver acceptable items). France had a contract for the same component with a different contractor which met the requirements. They allowed the US to modify their contract so we could obtain the needed components on time.

How is it innovative and creative?
This kind of partnership was not envisioned when the joint program was started. Each country was to acquire what it needed itself. Our relationship with the French allowed us to meet schedule.

How has this new improvement been applied?
As stated.

What were the results and lessons learned in developing this improvement?
System components have been delivered on time. Don't let programmatic preconceptions prevent finding a solution.

What other information would help another program evaluate its applicability towards their program?

Multinational Development

NAVAIR 703/604–2340x3222 – phone
Lawrence, Brian 703/604–2351 – fax
HARM
PMA242
PEO(T)/PMA242
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
PMA–242 Defense Suppression Systems
(HARM) AN/AGM–88

What is the name of your new idea, approach, process innovation, or lesson learned?
HARM BLOCK VI Multinational Development Program

Give a description of this idea and how it fits in the program:
HARM BLOCK VI upgrade was considered unaffordable by N88 prior to POM 98 development. Other sources of funding or offsets had to be identified to make the program viable.

How is it innovative and creative?
The program was subsequently structured to include Germany and Italy as equal partners in a development program for Block VI HARM and to work jointly on technology initiatives for future HARM upgrades or advanced ARM weapons.

How has this new improvement been applied?

A Summary Statement Of Intent (SSOI) was approved to allow formal negotiations to begin on a Tri-national Memorandum of Agreement. The Navy share of the program was funded by POM 98.

What were the results and lessons learned in developing this improvement?

MOA negotiations are proceeding well. N88 shows interest in other programs following this initiative.

What other information would help another program evaluate its applicability towards their program?

Additional information can be provided.

NDI

NDI

NAVAIR 904/772–2751x161 – phone
Selsor, Harry 904/772–2865 – fax
LAU–138 Chaff Dispenser selsor.psd@navair.navy.mil@pmdf@corals
PMA–272J
PEO(T)/PMA272J
Det Jacksonville
P.O. 122, NAS
Jacksonville, FL

What program are you with?
TACAIR EW: LAU–138 Chaff Dispenser

What is the name of your new idea, approach, process innovation, or lesson learned?
Acquisition Approach: Procurement of Military Hardware Under the NDI Acquisition Concept

Give a description of this idea and how it fits in the program:
In order to meet new military requirements and minimize the time to introduce a new and much improved chaff dispenser (LAU–138) to the F–14 aircraft platform, the decision was made, after market surveillance /investigations, to procure the launcher under the NDI(Non Developmental Item)Acquisition Concept. Procurement of the launcher as an NDI item allowed for lower acquisition costs with a shorter procurement cycle than would have been impossible with a new development program.

How is it innovative and creative?
Through the use of ongoing market surveillance and market investigation, it is possible to identify NDI items in the market place that will meet new military requirements as is, or with little modification; procurement costs would be reduced. Requirements possibly could be tailored to meet the specification of the NDI item.

How has this new improvement been applied?
See paragraph 4 above

What were the results and lessons learned in developing this improvement?
See paragraph 4 above

What other information would help another program evaluate its applicability towards their program?
The NDI Acquisition concept can be applied to any new acquisition program; it's not a new concept.

OPERATIONAL ASSESSMENT

Operational Assessment

NAVAIR 703/604–0885x3617 – phone
DeMars, LtCol Tom 703/604–1307 – fax
Predator MAE UAV demars@lan–email.peocu.navy.mil
PMA–263P
Program Executive Office
Cruise Missiles and Joint Unmanned Aerial Vehicles
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
PMA–263
Predator
Medium Altitude Endurance Unmanned Aerial Vehicle (MAE UAV)

What is the name of your new idea, approach, process innovation, or lesson learned?
"Operational Assessment Process"

Give a description of this idea and how it fits in the program:
The Predator Program started as the first Advanced Concept Technology Demonstration (ACTD). Classic developmental / operational testing did not occur. Instead "demonstrations" and actual operational "user deployments" took place. A Joint "Operational Assessment" of these demonstrations and deployments was conducted by service independent operational testers. The Operational Assessment was used to support the “potentially operationally suitable” finding, permitting the program to proceed past the ACTD phase.

How is it innovative and creative?
This flexible approach to the advanced development process avoided expensive, redundant testing and still preserved the necessary formality and trace ability in the program’s acquisition documentation.

How has this new improvement been applied?
Two years of testing at a cost of over $10.0 million were eliminated from the acquisition process with no loss of program credibility.

What were the results and lessons learned in developing this improvement?
This improvement was possible because operational users were involved in the system’s development and demonstration from the beginning. This made it possible for the operational test community, which became involved two years later, to work with refined user requirements. A lesson learned is that the operational assessment program would have been even more efficient had the test community been involved with the users from the beginning.

What other information would help another program evaluate its applicability towards their program?
See the "Acquisition Deskbook under ACTD Transition." The Predator Program Office and Office of the Secretary of Defense jointly wrote the first drafts on how to transition an ACTD program into the formal acquisition process.

OPERATIONAL TRAINING

Operational Training

NAVAIR 703/604–2340x3222 – phone
Lawrence, Brian 703/604–2351 – fax
HARM
PMA242
PEO(T)/PMA242
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
PMA–242 Defense Suppression Systems
(HARM) AN/AGM–88

What is the name of your new idea, approach, process innovation, or lesson learned?
HARM Training and TACMAN CD ROM

Give a description of this idea and how it fits in the program:
HARM is one of the most complex weapons for the operator to learn and remain current on acquisition and launch sequences. Better training has consistently been a high priority fleet OAG issue. A better way to provide fleet training was needed.

How is it innovative and creative?
HARM Tactics Manuals and Cockpit Training course were implemented in CD ROM interactive Hyper-Text and Point and Click formats. This has allowed us to put the most current information directly in the hands of the operators in an understandable format.

How has this new improvement been applied?
HARM training and TACMAN CD ROMS have been provided to all fleet HARM squadrons.

What were the results and lessons learned in developing this improvement?
Has been accepted very favorably by fleet users, but concerns remain about host platforms, control and distribution of data.

What other information would help another program evaluate its applicability towards their program?
Demonstrations and additional information can be provided.

ORGANIZATIONAL MAINTENANCE

Organizational Maintenance

NAVSEA 703/602–3509x510 – phone
Cunningham, LCDR S. 703/602–5606 – fax
Gold Disk Cunningham_Stan@hq.navsea.navy.mil
PMS325 (308)

What program are you with?
ADC(X); PMS 325

What is the name of your new idea, approach, process innovation, or lesson learned?
Application of the existing Gold Disk program to equipment in shipboard engineering spaces onboard AOE 6 Class ships.

Give a description of this idea and how it fits in the program:
Until this process was started on AOE 6 Class ships, no other ship class program office had attempted to apply Micro-Miniature (2M) Repair and Module Test and Repair (MTR) to circuit card assemblies (CCAs) to equipment in the engineering spaces.

How is it innovative and creative?
Our new ship classes are becoming more and more electronic and software intensive. For years we have had equipment above the damage control deck applicable to 2M and MTR. The first generation of ships where the practice can be applied to major equipment below the DC deck are now in service to the fleet. The time had come to break the paradigm.

How has this new improvement been applied?
Through a partnering agreement between PMS325, SEA 04, CDNSWC SSES, NUWC (Newport Division and Det Norfolk) and NSWC PHD DAMNECK, the known good CCAs and associated technical documentation were condensed for use on the AN/USM 646(V) and connected IBM compatible PC. The test station will determine whether the CCA being tested is faulty and if so, what component requires replacement.

What were the results and lessons learned in developing this improvement?
Getting three known good circuit cards became a problem due to the lag in the supply system as it begins to support new equipment. Perhaps in the future, provisions can be made where new CCAs can be made available to a Gold Disk development site before they enter the supply system. Program Managers could also ensure that sufficient numbers of spare CCAs are purchased under the ship construction contract.

What other information would help another program evaluate its applicability towards their program?
If your ship has equipment that depends on CCAs as critical interfaces between other major equipment or control systems, then Gold Disk applies.

PARAMETRIC PRICING

Parametric Pricing

NAVAIR 703/604–6211x6344 – phone
Barefoot, Barry W. 703/604–2796 – fax
T45TS barefootbw.ntrprs@ntrprs@navair.navy.mil
PMA–273G
PEOI(A)/PMA273
472 JP–1

What program are you with?
T45TS (PMA–273)

What is the name of your new idea, approach, process innovation, or lesson learned?
TINA Waivers / Parametric Pricing

Give a description of this idea and how it fits in the program:
We have recently begun to make rather extensive use of TINA waivers and parametric pricing as an acquisition strategy. A full proposal is evaluated and negotiated every third year (instead of every other year, as was the previous practice), and parametric pricing is used during the other years to expedite and streamline the contracting process.

How is it innovative and creative?
It is a new way of acquiring weapon systems, and it required us to challenge the existing process and pursue TINA waivers. There is a certain amount of risk associated with less rigorous pricing (less than full-up proposals), but it streamlines the process and allows us to better cope with resource shortfalls.

How has this new improvement been applied?
Parametric pricing involves the utilization of the prior year costs/prices as a take-off point, and then minor adjustments are made for escalation, learning, affordability, scope changes, and/or changing levels of risk.

What were the results and lessons learned in developing this improvement?
This methodology has significantly streamlined the acquisition process. Furthermore, it has given us a greater degree of contracting flexibility at a time when our acquisition resources are dwindling very rapidly.

What other information would help another program evaluate its applicability towards their program?
A program considering this approach should weigh resource constraints and the benefits of a streamlined acquisition strategy against the risk associated with less fidelity in the cost and pricing data.

PERFORMANCE BASED SPECIFICATIONS

Performance Based Specifications

NAVSEA 703/602–1911x563 – phone
Ange, Chris 703/602–1225 – fax
5" MK 45 Gun Mount Modification ange_christopher@hq.navsea.navy.mil
PMS 429G1
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5163

What program are you with?
Naval Surface Fire Support

What is the name of your new idea, approach, process innovation, or lesson learned?
Reduction of specs and standards used in the ERGM acquisition and the MK 45 Gun Mod development program.

Give a description of this idea and how it fits in the program:
MK 45
The MK 45 Gun Mod development acquisition was awarded to United Defense as a sole source contract. As part of an Integrated Product Team, they were involved in the development of the Statement of Work, specification, and CDRLs. By involving them at an early stage of the effort, a significant number of specs and standards (that were not required to support the design process) were eliminated.

How is it innovative and creative?
MK 45
Early involvement provided United Defense more flexibility in incorporating their own test procedures or design options in meeting performance requirements. In many cases, this flexibility allowed them to propose cost saving design options without compromising performance.

How has this new improvement been applied?
It was used in the solicitation and subsequent award of the ERGM contract and the MK 45 Gun Mod contract.

What were the results and lessons learned in developing this improvement?
MK 45
Testing for the MK 45 Gun Mod development program was streamlined and in many cases, unnecessary tests and requirements initially contained in the SOW were eliminated.

What other information would help another program evaluate its applicability towards their program?
None.

Performance Based Specifications

NAVSEA 703/604–6052x551 – phone
Barns, Mr. Charles 703/604–6056 – fax

MK30 Mod 2 ATS Program barns_charles@hq.navsea.navy.mil
PMS403C3
2011 Crystal Drive, Suite 817
Arlington, VA 22242

What program are you with?
MK30 MOD 2 ASW Training Target System (ATS) Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Performance Based Specification in D&V Contract

Give a description of this idea and how it fits in the program:
The D&V Contract invoked a high level system specification that contained the MK30 Mod 2's overall functional requirements and specific requirements for reliability, maintainability and other system quality factors. Through the performance of trade studies and analyses, the contractor derived detailed and discrete requirements that constitute the prime item development specifications.

How it fits in the program:
The contractor provided trade studies that presented design alternatives and the rationale for their decision. These studies were reviewed and commented on by the Government. Alternatives, results and selections were discussed between the contractor and the Government.

How is it innovative and creative?
The contractor was able to trade off various design alternatives vs life cycle cost. This had never been applied before.

How has this new improvement been applied?
See response 4.

What were the results and lessons learned in developing this improvement?
Results:
This creative process was successful in lowering the operations and support requirement once the system is fielded.
Lessons learned:
Properly incentivized, performance based specifications can be used to drive down operations and support cost without degrading system performance.

What other information would help another program evaluate its applicability towards their program?
Many defense contractors are not used to this type of reform. You MUST be able to live with the exact performance you specify (not what you thought you specified or wanted to specify, etc.).

Performance Based Specifications

MARCOR 703/784–4507x2074 DSN:278–4507 – phone
Chun, Mr. Wayne 703/784–4436 DSN: 278–4436 – fax
Assault Amphibious Vehicles
PM for Combat Support Weapons chunw@mqg–smtp3.usmc.mil

Commander, Marine Corps Systems Command (PM CSW)
2033 Barnett Avenue, Suite 315
Quantico, VA 22134–5010

What program are you with?
Assault Amphibious Vehicle

What is the name of your new idea, approach, process innovation, or lesson learned?
Review of Specifications

Give a description of this idea and how it fits in the program:
An in-process review of specifications. The current specification for the end item is provided to the original manufacturer of the item. In the manufacturer's review, he is encouraged to make any changes he desires under a fixed price contract that he feels is beneficial to him and that he can clearly justify as being mutually beneficial to the Government. The is proactive in assessing, expediting and approving these requests.

How is it innovative and creative?
This usual approach is to review the specification and make it in accordance with current philosophy of eliminating military specification. In dealing with a reprocurement to the AAV with a drawing file of almost 13,000 drawings and some military specifications the contractor was comfortable with, it was felt that the time and effort necessary to accomplish the review and modification of the original RFP would be prohibitive and likely result in not meeting our international commitments. This approach meant both Government and Industry agreeing to treat the specifications as subject to question and allow substitution of specifications as programmatically and technically appropriate without damaging budget or schedule.

How has this new improvement been applied?
The approach has been applied in the reprocurement of AAVs for the Brazilian Marine Corps. The Technical Data Page was modified by approval of Waivers and Deviations as required.

What were the results and lessons learned in developing this improvement?
This approach has validated the wisdom of delaying modification of specifications in a reprocurement in order to save time in getting under contract and utilizing the experience and knowledge of a manufacturer.

What other information would help another program evaluate its applicability towards their program?
If this approach is undertaken, it is important to have procedures in place to quickly respond to the manufacturer's recommended changes. These changes are likely to be suggested during the critical initial set up of manufacture or during the first part of fabrication and any delay in response will likely be detrimental to the contractor's contractual performance. These suggested changes will have to receive adequate engineering and logistics review before approval.

Performance Based Specifications

NAVAIR 703/604–2100x5518 – phone
Jensen, Colin 703/604–2896 – fax
Sparrow AIM/RIM–7P JENSENCW@AM@JFK
PMA–259
PEO(T)/PMA–259
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
Sparrow Missile

What is the name of your new idea, approach, process innovation, or lesson learned?
Performance Drawings for the Circuit Card level and below.

Give a description of this idea and how it fits in the program:
Currently, the Sparrow GCS is a build-to-print item using a government owned and controlled technical data package. Switching to performance based drawings gives the contractor the flexibility to build the circuit cards to pre-determined performance criteria and deliver as a "Black Box" device. This allows the contractor to meet the system performance needs, while allowing him the drawing and procurement flexibility within his own plant for component selection. This saves tremendous time and correspondence between the contractors and the cognizant government technical team for qualified parts approval.

How is it innovative and creative?
This innovation saves the contractor the time and expense of qualifying new parts. Component obsolescence is a big issue these days. This approach is an efficient method of retaining performance needs, but passing the responsibility of parts selection to the contractor.

How has this new improvement been applied?
Performance based drawings are being developed and subsequently brought into the drawing package through the ECP process.

What were the results and lessons learned in developing this improvement?
Results are not yet available as this is currently in the process of being implemented. Expected results are lower cost circuit boards, greater contractor flexibility, and greater schedule adherence by avoiding government parts approval.

An important lesson is to insure that the requirements are very well documented on the performance drawing. Since the government is giving up lower level visibility, it is important to insure adequate performance requirements are identified so system performance is not degraded.

What other information would help another program evaluate its applicability towards their program?
The performance drawing requirements can be implemented at any level within the government data package. Entire systems can eventually be bought as "black box" devices. One problem to consider when determining proper performance drawing level is the added problem presented to maintenance and repair of the system. The higher the level of initial government visibility into the design, the more reliance you have on a single source of supply. The procurement of two separate devices to performance based drawings and specifications, from two different contractors, raises substantial logistical problems. We would essentially end up with two identically identified systems that are not in fact identical, or interchangeable below the all-up-round level.

Performance Based Specifications

NAVSEA 703/602–1911x564 – phone
Lyons / Ange, Ken / Chris 703/602–1225 – fax
Extended Range Guided Munition (ERGM) lyons_kenneth@hq.navsea.navy.mil
PMS 429G2
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5165

What program are you with?
Naval Surface Fire Support

What is the name of your new idea, approach, process innovation, or lesson learned?

Reduction of specs and standards used in the ERGM acquisition and the MK 45 Gun Mod development program.

Give a description of this idea and how it fits in the program:

ERGM

Solicitation of technical comments from potential bidders on the draft ERGM performance specification prior to it being formally advertised. The draft performance specification was distributed to interested contractors approximately 3 months prior to the planned "official" advertising date. The spec reflected parameters detailed in the Operational Requirements Document and also provided detailed test requirements and design constraints. Contractors were then given 30 days to provide recommended changes to the spec. If the revisions made technical sense, did not change ORD requirements, and did not provide an unfair advantage to a specific bidder, they were incorporated in the final performance spec prior to it being advertised.

In the ERGM solicitation, almost all references to MIL–SPECs and MIL–STDs were eliminated. Only those documents which were related to munition safety and had received an ASN waiver for use were referenced.

How is it innovative and creative?

ERGM

Solicitation of technical comments provided potential bidders a method to suggest changes in performance requirements. In this approach, design methods and technical approaches that were not considered in preparing the preliminary performance specification were evaluated. It also gave vendors a clearer understanding of what the Navy wanted by providing a forum regarding technical interchange of information prior to the development of proposals. It provided potential bidders more flexibility in incorporating their own test procedures or design options in meeting performance requirements. In many cases, this flexibility allowed the vendor to propose less expensive design options without compromising performance.

How has this new improvement been applied?

It was used in the solicitation and subsequent award of the ERGM contract and the MK 45 Gun Mod contract.

What were the results and lessons learned in developing this improvement?

ERGM

This approach minimized confusion among bidders with regard to meeting ERGM technical requirements. It also allowed bidders to recommend technical concepts and approaches that were either unknown or not considered feasible by the technical team which prepared the document. This led to the development of proposals which identified processes and technologies which might not have been considered if the vendor would have to comply with the initial performance specification. By following this process, clear and concise technical proposals were received in the final bidding process because confusion regarding key requirements was eliminated.

What other information would help another program evaluate its applicability towards their program?

None.

Performance Based Specifications

NAVSEA 703/602–0651x229 – phone
Reiter, Scott 703/602–0606 – fax
STANDARD Missile Reiter_Scott_J@hq.navsea.navy.mil
PEO(TAD) PMS422–211
Department of the Navy
Program Executive Office
Theater Air Defense
2531 Jefferson Davis Highway
Arlington, VA 22242–5170

What program are you with?
STANDARD Missile–2 Block IIIB Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Specification Conversion from "Build-To-Print" to "Build-To-Specification" for Reprocurements (Process Innovation)

Give a description of this idea and how it fits in the program:

In the traditional acquisition process or "build-to-print", a detailed Technical Data Package (TDP) was developed for the Government to define and control every detail of the weapon system design. This TDP, which was made up of PIDS, CIDS, PDs, ICDs, technical drawings, Military Specifications and Standards, source control drawings, test and evaluation procedures, etc., was used to control the manufacturing, testing, validation, assembly, and maintenance processes for the system.

Acquisition streamlining or “build-to-specification”, replaces the traditional TDP, with high level performance-based Top Level Requirements (TLRs). The contractor must develop the design to meet the performance called for in the TLRs. The contractor has control of the lower tier requirements and may improve the design or processes as they see fit without government oversight or approval. The Government still has full disclosure and ownership of the contractor-maintained TDP, but only controls the performance-based TLRs. To compensate for the loss of control of the lower tier requirements, the Government requires the contractor to warranty their work.

Fully-empowered, Government-Contractor Integrated Product Teams (IPTs) are used to convert detail TDPs to performance-based TDPs and to develop to the Procurement Requests (PRs) with the appropriate warranty language for the reprocurement of the weapon system.

How is it innovative and creative?

Performance-based requirements are revolutionary for the Government. Many of the Military Standards and Specifications are outdated and have commercial equivalents which reflect more current technology and quality. By allowing the contractors to have control of the lower tier requirements, they can update designs and processes to improve producibility and reliability without the extended process of government review boards and approval cycles. Additionally, by requiring the contractor to lengthen the warranty of their production items, the contractor assumes some of the risk associated with the production runs.

By using fully-empowered, Government-contractor IPT to convert the TDP and develop the PR, a simultaneous effort can be coordinated to cut the whole conversion process to a minimal time. The IPT is structured into small groups (3–7 participants) which are dedicated to one of the major subsystems of the overall weapon system. These groups have the expertise and the authority to

define which of the requirements for their particular subsystem are performance-based. Performance-based requirements are flowed up into the Government controlled TLRs for the weapon system. All remaining requirements should be flowed to the lower tier data package under the contractor control. The system team – acting as an overarching team – compiles the inputs from the subsystem teams into the new TLR and flows the non-performance-based requirements down to the appropriate subsystem team for incorporation into the lower tier TDP. The overarching team is, also, responsible for ensuring that the subsystem teams work toward the same goals and objectives. The system and subsystem teams produce the documentation necessary to change the requirements in the TDP. Finally, a separate team simultaneously develops the PR based on the new TLRs coming out of the system team and the subsystem teams. If planned properly, the PR and the change documentation should be complete and ready for approval as the final products of the IPT.

How has this new improvement been applied?

For STANDARD Missile program, our objectives were to convert the SM–2 Block IIIB ORDALT Kit TDP and the SM–2 Block IIIA and IIIB Guidance, Control and Airframe (GC&A) TDP from Build-to-Print to Build-to-Specification, to develop a PR for the reprocurement of Block IIIA missiles for Foreign Military Sales (FMS), and the procurement of backfitted Block IIIB missiles and Block IIIB AURs. To do this, an IPT was established to produce an Engineering Change Proposal (ECP) against the current TDP (PIDS, CIDS, PDs, ICDs, Round and section level drawings, and lower tier drawings) and a PR for FY97/98 production. Our primary goal was to release the PR in time to support having a signed contract in place on October 1996, and to have the TDP changes completed in time to support the negotiation of the contract. The IPT was chaired by the Government and co-chaired by the prime contractor (see Figure 1).

The PR Team identified the requirements that would be used as the TLRs and be under government control. The Round and Section Teams reviewed all of the current requirements and identified those that were performance-based and flowed them to the appropriate TLRs. All other requirements were flowed to the lower tier TDP. All Military Specifications and Standards that had commercial equivalents or were not on the approved waiver list were removed from the TLRs and marked as “For Guidance Only” in the lower tier TDP. Once a common approach was agreed upon by the whole IPT, the conversion process was relatively simple. Essentially the approach we decided upon was to define in the TLRs the desired performance of the missile in terms of the final results required, conformance verification, functional requirements, operating environment, interface and interchangeability. No statement of methods or how-to requirements should be included in the new TLRs. Exceptions to our agreed approach and unique requirements were address on an individual bases by the IPT.

Because the lower-tier TDP was now under contractor control, the contractor had to assume the risks of meeting the performance requirements for the missile. Thus, the PR team invoked an eight year warranty in the new contract. Basically, this warranty covered routine inspection and maintenance of the missile as well as repair or replacement of faulty hardware at no additional cost to the Government.

What were the results and lessons learned in developing this improvement?

The SM–2 Block IIIB Acquisition Reform IPT successfully modified the existing FY95/96 ORDALT production contract to replace detailed requirements with performance-based requirements, and developed a new, performance-based contract for the FY97/98 AUR production within the required schedule.

The greatest threat to the completion of our objectives was the potential for miscommunication and teams going off in different directions. The IPT was started with a kick-off meeting that presented the goals, objectives, and means defined by the Government. Careful detail was paid to ensure that everyone understood the process and goals. However, some of the membership of the teams changed after the kick-off meeting which caused the communication problems that originally concerned us. Even late in the process, we still were pushing some members to understand the goals and cooperate with the IPT. Although, there were some rough spots in the process, the overall goals were met.

A problem that threatened the rapid turn-around of the PR was the lack of participation of the manufacturing personnel. Furthermore, this lack of participation resulted in a delay of the submittal of the contract proposal due to lack of understanding from the manufacturing personnel preparing the bid.

A constant battle throughout the conversion process was resisting the temptation to get involved in larger issued concerning the missile. It was imperative that we focused only on flowing requirements up and down, and not get pulled off on tangents trying to resolve an issue which was outside of the scope of the IPT. Our mission was to change the way we buy missile, not the way we make missiles. It was decided that when these issues did arise, we would document them for later discussion, and quickly refocus on the objectives at hand. This worked very well, and delays were kept to a minimum.

One of the secondary goals or the IPT was to reduce travel expenses by maximizing the use of teleconferencing, video-conferencing, and other electronic media. To a large extent we were successful when working in the smaller teams; however, meetings were still required when the whole IPT met and when significant volumes of classified data were being discussed.

What other information would help another program evaluate its applicability towards their program?

This process is applicable to any program attempting to convert how-to data packages to performance-based data packages.

Performance Based Specifications

NAVAIR 703/604–1668x2115 DSN: 664–1668x2115 – phone
Szego, George703/604–1730 – fax
TA/AS szego@lan–email.peocu.nayv.mil
PMA–2081D
Program Executive Officer
Cruise Missiles and Joint Unmanned Aerial Vehicles
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?

Target Auxiliary and Augmentation Systems (TA/AS)
Aerial Target and Decoy Systems (PMA–208)

What is the name of your new idea, approach, process innovation, or lesson learned?

Periodic review and update of the TA/AS performance specifications and interface description documents.

Give a description of this idea and how it fits in the program:
TA/AS are the electronic payloads or boxes that are used by more than one aerial target. They are procured commonly to avoid prime vehicle contractor overhead and materiel handling factors while getting the cost reduction benefits of quantity buys. The performance specifications provide the technical characteristics and performance levels required of the equipment.

How is it innovative and creative?
The periodic review and update keeps the specifications in tune with current acquisition policy while allowing for the competitive acquisition of the black boxes. The currency of the specifications allows for quick and easy coordination of the Procurement Initiation Documents.

How has this new improvement been applied?
The improvement has supported the award of three contracts in FY96 and will be used for additional contracts in FY98.

What were the results and lessons learned in developing this improvement?
As the performance specification had already been reviewed for content and conformance with policy, coordination of the Procurement Initiation Documents was straight forward with no delays.

What other information would help another program evaluate its applicability towards their program?
This idea is applicable to any office that is responsible for the repetitive competitive procurement of items.

PRODUCT DELIVERY

Product Delivery

NAVSEA 703/602–7812 – phone
Arnold, Michael 703/418–1163 – fax
LHD Acquisition Office arnold_mike@hq.navsea.navy.mil
PMS377
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?
LHD 1 Class Acquisition Office

What is the name of your new idea, approach, process innovation, or lesson learned?
LHD 1 Class Post Delivery and Fleet Introduction Manual

Give a description of this idea and how it fits in the program:
The manual consolidates in chronological order all the correspondence and actions necessary to deliver a ship and introduce it into the Fleet. This document is used to assure necessary actions are accomplished in a timely and standardized manner.

How is it innovative and creative?
This document did not exist at the time the Post Delivery group was established. It was unique in that a future need was recognized and a document was established that consolidated the information in an orderly manner for quick retrieval.

How has this new improvement been applied?
This document is used to give new personnel an overview of the Post Delivery process and has been distributed for use by other offices. It has greatly improved the ability to anticipate requirement well ahead of time.

What were the results and lessons learned in developing this improvement?
This document is easy to update for a specific applicability but an effort is required to put it together from the ground up.

What other information would help another program evaluate its applicability towards their program?

PROGRAM DOCUMENTATION – SHIPS

Program Documentation – Ships

NAVSEA 703/602–8132 – phone
Amoroso, John 703/418–1163 – fax
PMS377G
NC3/8E34

What program are you with?
PEO CLA PMS377 Amphibious Warfare Program
LSD CV Shipbuilding Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Program Operational Notebook

Give a description of this idea and how it fits in the program:
A notebook has been developed as a general guide to outline the timing and preparation procedure for routine documentation associated with a ship acquisition program. The actions addressed in the notebook are those that require interface outside of NAVSEA.

How is it innovative and creative?
The notebook provides a ready reference and timely reminder of referred actions and their content that is required throughout the course of a ship acquisition program. It is helpful in establishing a point of reference particularly as the program transitions thru ships of the class or when there is a change of personnel in the program office.

How has this new improvement been applied?
A copy of the notebook has been provided to other ship acquisition programs.

What were the results and lessons learned in developing this improvement?
Provides continuity and a ready reference for required actions.

What other information would help another program evaluate its applicability towards their program?
Obtain a copy of the guide and review for adaptability or applicability to their program.

PROGRAM REVIEW

Program Review

NAVAIR 703/604–1002x3940 – phone
Burgess, Harry 703/604–1278 – fax
Tomahawk Command and Control Program burgess@lan–email.peocu.navy.mil
PMA–281–3
Command and Control Systems Program (PMA–281)
PEO, Cruise Missiles and Joint Unmanned Aerial
Vehicles, (PEO(CU))
1213 Jefferson Davis Highway
Arlington, VA 22246

What program are you with?
Tomahawk Command and Control Program. – TMPC

What is the name of your new idea, approach, process innovation, or lesson learned?
Standardized kernels for system development milestone reviews.

Give a description of this idea and how it fits in the program:

PMA–281 is responsible for procuring three major subsystems that comprise the Tomahawk Theater Mission Planning Center (TMPC), each with a different developer. To provide for better coordination of the various development efforts, standardized kernels have been developed to monitor the development process.

A generic kernel has been identified for each milestone review that occurs during the development process. These milestone reviews originally came from DOD–STD–2167A, but have been adapted for MIL–STD–498. The kernels do not attempt to define how the developer will produce the software. Instead, the focus is on Government activities in support of the milestone reviews by which the developer's process is monitored. The kernel defines Inputs, Entry Criteria, Activities, Exit Criteria, and Outputs associated with the milestone.

Inputs: Developer inputs are mostly MIL–STD–498 documentation and meeting agendas. Government inputs, usually through its Systems Engineering and Integration Agent (SEIA) or its Independent Verification and Validation (IV&V) agent, are reviews of those documents, including detailed analysis of the flow down of requirements from source documents through the developer's specification and design documents plus detailed analyses of any significant algorithms to be coded in the software. The Government is also required to provide a checklist of items to be covered at the milestone review.

Entry Criteria: These define the conditions that must be met before the milestone review can be held. The criteria include delivery of all contractor documentation required for that milestone and completion of the Government's review. The Government is required to hold a readiness meeting with its SEIA and IV&V agent two weeks prior to the milestone in order to ensure entry criteria have been met and to give permission to proceed with the milestone review.

Activities: These are the activities that must occur as part of the milestone review, including both developer and Government activities.

Exit Criteria: These are the conditions that must be met for the milestone review to be considered successfully completed.

Outputs: These are the expected outputs from the milestone review, including minutes and action items.

A nominal schedule has been developed identifying when documents should be delivered and milestone reviews should be held.

The full set of kernels assumes a large scale development effort with full MIL–STD–498 documentation. For smaller efforts, such as a maintenance build or a short development, this full set of activities is inappropriate. Tailoring guidance has also been developed to define the documentation and milestones more appropriate to the smaller efforts.

Both the full set of kernels and the tailored set are generic. For any specific development effort they must be tailored to the specific documentation that the Government requires and will include in the CDRLs. The developer's proposal should modify the nominal schedule with a new schedule based on its software cost estimating methodology, which usually provides estimates in terms of required staff-months for each phase of the development. In addition, the developer may propose a different set of milestones based on its internal development process. In that case, the kernels must be modified to reflect that developer's process.

How is it innovative and creative?

These kernels clarify the Government's oversight of the development process. System requirements are defined in the requirements specifications that are included in the statement of work. The Government's expectations of itself and of the developer in the oversight of the development process have not been as clearly defined in the past. In particular, specific criteria by which review meetings will be evaluated have not existed previously in this program.

How has this new improvement been applied?

The kernels have only recently been developed. They are being applied as guidance for upcoming milestone reviews on existing contracts. This provides an opportunity to review how well each kernel works in practice. The kernels will be mandated on future contracts.

What were the results and lessons learned in developing this improvement?

The process of defining the kernels and a nominal timeline required a significant review of the development lifecycle and documentation that actually is used. The Government's requirements for its own activities were formally identified, which helps not just the Government but also the developer in coordinating oversight of the program.

What other information would help another program evaluate its applicability towards their program?

The kernels themselves are available to other programs. They consist of Microsoft Word 6.0 and Excel 5.0 files, plus the nominal schedule in Microsoft Project 4.0.

QUALITY MANAGEMENT

Quality Management

NAVAIR 703/604–6211X6344 – phone
Barefoot, Barry W. 703/604–2796 – fax
T45TS barefootbw.ntrprs@ntrprs@navair.navy.mil
PMA–273G
PEOI(A)/PMA273
472 JP–1

What program are you with?
T45TS (PMA–273)

What is the name of your new idea, approach, process innovation, or lesson learned?
Root Cause Analysis / Closed Loop Corrective Action System

Give a description of this idea and how it fits in the program:
Root cause analysis consists of both a sincere commitment to improve the quality of processes and products, and a systematic process for understanding the fundamental causes of nonconformances. A closed loop corrective action system is the mechanism for implementing actions that preclude the possibility (or at least drastically reduce the likelihood) of similar future nonconformances. The system only works if the corrective actions are directed at the root cause(s) of the nonconformances, rather than just the symptoms of the problem. Together, these tools provide the foundation for a prevention-based quality management system.

How is it innovative and creative?
Although this is not a new concept in the world of quality management, it is an often forgotten and/or misunderstood one within the aerospace industry. A new or revitalized commitment to root cause analysis/closed loop corrective action will allow the aerospace industry to achieve a new plateau in quality management.

How has this new improvement been applied?
By expressing our dissatisfaction with the contractors' quality management systems and emphasizing the importance of thorough root cause analysis and corrective action when nonconformances are discovered, we have built up a cadre of people (both government and contractor) that are aggressively pursuing these important initiatives. A joint team (contractor / Navy / DCMC) was established to address root cause analysis for the T–45/AV–8 programs, and to influence the enterprise-wide corrective action process. Since then, several of the original T–45/AV–8 team members have moved on to the enterprise effort. This grassroots approach (and subsequent expansion to the enterprise) has led to a more deeply ingrained commitment to these important initiatives throughout the enterprise.

What were the results and lessons learned in developing this improvement?
Key contractor personnel have a much greater appreciation for these important quality management initiatives. There is more widespread commitment towards the establishment of a prevention-based quality program. The contractors are finally beginning to utilize a variety of tools, including Toyota's "Five Whys," to understand the root causes of nonconformances and drastically reduce the possibility of reoccurrences.

What other information would help another program evaluate its applicability towards their program?
There is no doubt that every program can benefit from a better quality management system, one that includes root cause analysis and closed loop corrective action. However, the road is a very long and frustrating one. Typically, a cultural change is required in order to implement such drastic

changes. An organization will need a significant emotional event, a champion or zealot, and long hours of encouragement, awareness building, and education.

Quality Management

MARCOR 703/696–1163 – phone
Low, Richard 703/696–1171 – fax
Ammunition
AM–RDA
3033 Wilson Blvd.
Arlington, VA 22201

What program are you with?
Ammunition

What is the name of your new idea, approach, process innovation, or lesson learned?
Contractor Performance Certification Program (CP2)

Give a description of this idea and how it fits in the program:
The CP2 program is a process that is used to evaluate and certify a contractor's commitment to quality and continuous process improvement. Teams of auditors are sent to prospective contractor's facilities to evaluate their quality program. All aspects of quality are evaluated, from the control of non-conforming material, documentation, SPC to their commitment to continuous improvement. Once minimum standards are met the facility is certified under the program.

How is it innovative and creative?
Once contractors are certified and have demonstrated quality programs, benefits can be passed to the contractor that will lower the cost of ammunition. Certain inspections and acceptance tests can be waived. Approval of ECPs and waivers can be performed at the facility. During contracting, the CP2 certification can be used as a criteria for best value selection. Finally, certified facilities can show cost savings in their manufacturing processes due to a lower number of rejects and smaller amounts of waste.

How has this new improvement been applied?
Almost all of the production facilities manufacturing ammunition for the Marine Corps are either CP2 certified or undergoing the process to become certified.

What were the results and lessons learned in developing this improvement?
The quality of the ammunition produced for the Marine Corps has improved. The amount of ammunition that is rejected and the amount currently under litigation has gone down.

What other information would help another program evaluate its applicability towards their program?

REQUIREMENTS DEVELOPMENT

Requirements Development

NAVSEA 703/602–9079x201 – phone
Goodling, C. R. 703/602–2070 – fax
AN/UYQ–70(V) DISPLAY SYSTEM Goodling_C_Ronald@hq.navsea.navy.mil
SEA 91W5
Naval Sea Systems Command

What program are you with?
Navy Tactical Computers and Displays Division, SEA 91W5

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson learned: Define and include all life cycle support for COTS as part of the basic competitive contract. Adding supply support after the contract is established is hard to do.

Give a description of this idea and how it fits in the program:
COTS programs require careful examination/review before the RFP is release regarding what responsibility/role the contractor & the Navy will have on the program for life cycle support.

How is it innovative and creative?
Nothing innovative. Requires advanced planning.

How has this new improvement been applied?
Following on competitive contract will apply this.

What were the results and lessons learned in developing this improvement?
The lesson learned of trying to implement supply support: a Just in Time System (JITS) to a COTS based program after a competitive award is that the financial cost leverage & advantage disappears after the award. This needs to be part of the initial contract RFP.

Opportunity to examine other technical innovative approaches from industry by different contractors is lost.

What other information would help another program evaluate its applicability towards their program?
N/A

REQUIREMENTS EVALUATION

Requirements Evaluation

NAVAIR 805/989–5932 DSN: 351–5932 – phone
Stone, Freeman 805/989–5378 – fax
MQM–8G(EER) Aerial Target Program stonef@smtpgw.mugu.navy.mil
PMA–208B2
PEO(CU)
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
PMA–208 Aerial Target And Decoy Systems

What is the name of your new idea, approach, process innovation, or lesson learned?
Revisit user requirements prior to finalizing production configuration.

Give a description of this idea and how it fits in the program:
Following EMD of the MQM–8G(EER), inputs from OSD, OPTEVFOR, and PEO(TAD) were evaluated for incorporation into the final production configuration.

How is it innovative and creative?
Acquisition programs normally occur over several years during which time requirements can change significantly. Often these changes can be accommodated prior to final configuration and sometimes within existing budgets.

How has this new improvement been applied?
Changes in requirements were taken into consideration, feasibility of incorporation was evaluated, efficiencies were worked, and changes were incorporated within budget.

What were the results and lessons learned in developing this improvement?
We have been able to incorporate several changes which will make the MQM–8G(EER) a more threat representative and versatile target for supporting weapons DOT&E.

What other information would help another program evaluate its applicability towards their program?
Continuing sensitivity to user requirements is vital to meet the customer's needs.

REQUIREMENTS GENERATION

Requirements Generation

NAVAIR 703/604–6210x2433 – phone
Converse, LCDR Mark 703/604–6281 – fax
F/A–18 Advanced Targeting FLIR (ATFLIR)
PEO (T)
1421 Jefferson Davis Highway
JP1/Room 820
Arlington, VA 22243–5120

What program are you with?
PEO (T), PMA–265, F/A–18 Advanced Targeting FLIR (ATFLIR).

What is the name of your new idea, approach, process innovation, or lesson learned?
Performance Specification flowdown.

Give a description of this idea and how it fits in the program:
For the ATFLIR E&MD program, a performance specification was written with a verbatim basis of the ORD. This performance specification will be sent to the potential suppliers for comment before the RFP is released.

How is it innovative and creative?

A. The starting point for the ATFLIR performance specification was a verbatim copy of the ORD. With the help of the prime contractor, McDonnell Douglas Aerospace (MDA), additional words were added only where required to ensure that the performance described was both technically achievable and affordable. Where appropriate, recommendations for an ORD change were made to N88 on areas that were nebulous.

B. Before releasing their RFP for the E&MD, MDA will send the performance specification to the potential suppliers for comment on both technical and programmatic issues. The suppliers will be asked to assess the performance specification (ORD) requirements while treating cost an independent variable. The Government plans to use this data to assess risk in the cost, schedule and technical performance areas. Mitigating steps can be made, which may include changing the ORD and performance specification prior to release of the RFP.

How has this new improvement been applied?
This idea has been applied to the ATFLIR performance specification.

What were the results and lessons learned in developing this improvement?
None to date. Results are yet to be evaluated; Milestone II is presently planned for Dec 97.

What other information would help another program evaluate its applicability towards their program?
None.

Requirements Generation

NAVAIR 703/604–1000x3820 – phone
Lanes, CDR Fred 703/604–1216 – fax
Tomahawk Baseline Improvement Program lanes@lan–email.peocu.navy.mil
PMA–280
1213 Jefferson Davis Hwy.

Arlington, VA 22246

What program are you with?
Tomahawk Baseline Improvement Program

What is the name of your new idea, approach, process innovation, or lesson learned?
"Need Based Acquisition" (NBA)

Give a description of this idea and how it fits in the program:
Cost As An Independent Variable is one of today's major thrusts in acquisition reform. However, it is somewhat limited in scope since it looks only at trading requirements versus cost during the initial requirements development phase of a program. Need Based Acquisition takes the next logical step and allows tradeoffs between the level of "engineering desired" verses the "engineering actually needed". NBA helps the Program Manager break the point off the design engineer's pencil by incrementally structuring, within the contract, the amount of testing, surveillance or analysis required to actually achieve the "needed" data instead of a blanket maximum level of effort. With this approach, the Program Manager can obtain the essential design information without wasting valuable manpower and funding resources. As an example, a reliability surveillance test has traditionally required 5000 hours of testing to complete. Historically however, after 2000 hours no additional failures were normally found, even though the test continued. By structuring the contracted effort to include an "early out" statement, the Program Manager, with concurrence from engineering, could terminate the effort at this interim point, having obtained sufficient data to assure that the design is satisfactory, and save valuable manpower and costs. In today's cost savings environment, the 90% solution, if used judiciously, may meet the needs of the program. Candidates for Need Based Acquisition include detailed engineering analysis, qualification testing and reliability demonstrations.

How is it innovative and creative?
This approach allows the Program Manager to optimize the level of effort expended on critical tasks. By breaking down the old barrier of "This is what we want because it's what we have always done." to "This is what we really need." The Program Manager and engineering staff can both satisfy the requirement and maximize manpower utilization and cost savings. Under cost type contracts, this approach can be utilized on a continuous basis and is especially effective under the IPT concept where Government and Contractor personnel are daily reviewing the status of ongoing efforts. This approach does require a paradigm shift among the engineering staff to accept the 90% answer instead of the 110% answer.

How has this new improvement been applied?
TBIP is currently restructuring the program to more closely align the requirements of the program with the needs of the Fleet. During this definitization, "early out" criteria is being established and the level of testing is being reconsidered by each IPT. Initial indication are that this approach will save over $1.0M in one area alone and significantly reduce schedule risk. As the program continues to mature, each IPT is tasked to continually evaluate the data available versus the data required in order to define other opportunities for savings.

What were the results and lessons learned in developing this improvement?
This process is still in work at this writing, so the jury is still out. However, there are still positive results that are evident. This process forces the entire industry/government team to look at a solution first from a cost aspect rather than engineering, and find an acceptable engineering solution from the bottom up.

What other information would help another program evaluate its applicability towards their program?

The program position in its life cycle and contract cycle needs to be considered. A program manager needs to ask if there is still some level of flexibility available within the current program and contract structure, and what the cost and schedule tradeoff would be to change the status quo.

Requirements Generation

NAVSEA 703/418–2555 – phone
Manvel, Captain J. Talbot 703/418–1522 – fax
CVX Program MANVEL_TAL_CAPT@HQ.NAVSEA.NAVY.MIL
PMS378
CVX Design Site
2361 Jefferson Davis Highway
Heitman Suite PL 412
Arlington, VA 22202

What program are you with?
PMS378 CVX Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Strategy to Task to Technology (STT)
Give a description of this idea and how it fits in the program:
This process identifies current technological innovation potential by category and a quantitative ranking for possible application of the technology to meet ship requirements in the design process is developed jointly by NAVSEA/Fleet. Starting with the JCS Universal Joint Task List (UJTL), where warfighting tasks are defined, a list of ship attributes is developed from the UJTL. A technological investment plan is developed jointly with Fleet representatives that is traceable back to warfighting tasks. The results are utilized to guide design/investment strategy.

How is it innovative and creative?
Fleet input into the ship design process is incorporated from the start of design conception with the objective of optimizing current dynamic technological areas for application into a prioritized listing of ship attributes using prescribed JCS warfighting tasks. Comparison/ranking is accomplished using EXPERT software program.

How has this new improvement been applied?
To formulated a technology investment plan for CVX design process post MS 0

What were the results and lessons learned in developing this improvement?
Differences exist between NAVSEA/Fleet and PACFLT/LANTFLT for application of technology in ship design process. CVX design is in developmental stage (early MS 0) and final results not realized.

What other information would help another program evaluate its applicability towards their program?
Documentation is available at CVX program office (Heitman Bldg. Suite PL412).

Requirements Generation

SPAWAR 703/602–9549 DSN: 332–9549 – phone
Wang, Mr. Gary 703/602–5327 – fax
Naval Electronic Combat Surveillance Systems (NECSS)
PMW 163–2 WANGG@SMTP–GW.SPAWAR.NAVY.MIL
2451 Crystal Drive

Arlington, VA 22245–5200

What program are you with?
Ships Signal Exploitation Equipment (SSEE)

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of Common Baseline Across Programs and Agencies

Give a description of this idea and how it fits in the program:
The SSEE Program has developed a Core System Architecture and a Common Baseline approach for developing functionalities that meet Fleet Commander's in Chief (CINC) signal collection and processing requirements.

How is it innovative and creative?
The SSEE Program has been one of the Navy's first successful modernization programs. By establishing a common baseline set of functionalities, and incrementally upgrading the baseline as new technology becomes available, the SSEE Program has been extremely successful at providing additional functionalities and improved system capabilities to fleet users annually.

How has this new improvement been applied?
The SSEE common architecture was applied to SSEE and the Cryptologic Carry-On Program (CCOP) initially. This process of leveraging both programs resulted in cost savings through volume hardware procurements, enabled the use of the same commercial specifications, and allowed the same Government agencies to be used to integrate hardware and software for both programs.

What were the results and lessons learned in developing this improvement?
The development approach demonstrated by SSEE to provide system improvements has proven to be extremely effective. By initially developing a Core system capability and a defined set of functionalities, and adding new functionalities as they became available, system improvements and additional functionalities have been expedited to the warfighter. Further, the use of a standardized baseline and hardware and software commonality has enabled SSEE to be interoperable with other Navy programs, such as CCOP, and has provided the foundation whereby other military services, NSA and allies can become interoperable through the use of the SSEE common baseline approach. Through the application of this approach cost savings have been realized in the areas of hardware and software procurement and maintenance, training curriculum preparation and documentation development.

What other information would help another program evaluate its applicability towards their program?
The SSEE approach can be applied to other programs that can provide an initial subset of functionalities, with incremental system improvements and additional functionalities provided annually or as the technology become available. The goal of this approach is twofold: 1) To provide the initial capability to the Fleet as soon as possible, and 2) To limit the scope of incremental improvements to increments that can be accomplished in a short period of time (e. g., one year), thus enabling deliveries of improved system capabilities and functionalities to be made often to Fleet users.

Requirements Generation

SPAWAR 703/602–7469 – phone
Westhoff, Mr. Jim703/602–6415 – fax
COBLU westhofj@smtp–gw.spawar.navy.mil
163–4

DoN Space & Naval Warfare Systems Command
163–4 Joint Program Office
3rd Floor
2451 Crystal Drive
Arlington, VA 22254–5200

What program are you with?
Cooperative OutBoard Logistics Update (COBLU)

What is the name of your new idea, approach, process innovation, or lesson learned?
Functional Requirements Document Performance-based Specifications

Give a description of this idea and how it fits in the program:
This document contain sufficient detail to enable the contractor to produce a product which meets not only engineering, but also operational requirements for the Navy.

How is it innovative and creative?
This document is created with the contractor, and government engineers, maintenance providers, and operators providing inputs so that once the document is finalized, there is no question as to the responsibilities of the parties, their needs, or abilities. Neither the program managers nor the contractors have to wait until the testing phase to discover that further modifications are required, or that the contractor is unable to meet the specifications in the document.

How has this new improvement been applied?
Discussions are held formally and informally after the functional requirement is defined and prior to the release of the official FRD.

What were the results and lessons learned in developing this improvement?
The primary lesson learned is that inclusion of the contractor and other end users in the technical discussions concerning the FRD improves the clarity of the FRD, thereby increasing the likelihood of the contractor meeting its specifications.

What other information would help another program evaluate its applicability towards their program?
N/A

REQUIREMENTS GENERATION – IT

Requirements Generation – IT

SPAWAR 703/602–4194 – phone
Malman, Alan 703/602–3734 – fax
Navy Standard Integrated Personnel System (NSIPS) malmana@smtp–gw.spawar.navy.mil
PMW 153
2451 Crystal Drive, Room 706
Arlington, VA 22245–5200

What program are you with?
Navy Standard Integrated Personnel System (NSIPS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Automated Information System Operational Requirements Document (ORD) Processing:

Process Innovation: Developed a streamlined approach for developing, reviewing, and approving an ORD for the NSIPS program by effectively using the Integrated Product Team (IPT) concept.

Give a description of this idea and how it fits in the program:
DoD 5000.2–R requires ACAT IA ORDs to be approved by the Component Chief of Staff (CNO) and endorsed by the JROC, or appropriate Principal Staff Assistant (OUSD (P&R) for NSIPS, if delegated by the JROC. Prior to the new DoD 5000.2–R, AIS programs were not required to obtain an ORD for Milestone decisions and program execution. Within the Navy, an approval process did not exist. An ORD had to be developed and approved for the NSIPS program in a timely manner to meet timelines for phasing out the legacy systems being replaced by NSIPS.

How is it innovative and creative?
Using the IPT process, the NSIPS team expects to have an approved ORD in less than 5 months. This time includes preparing, reviewing, and approving the ORD. In 1993, NAVAIR statistics on their ORD approval process showed an average of 11 months to develop and approve ORDs at levels lower than CNO. Within SPAWAR, ORDs have taken up to 2 years to approve at levels lower than CNO.

How has this new improvement been applied?
As required by DoD 5000.2–R, the NSIPS team stood up an Overarching Integrated Product Teams (OIPT) with Working Level Integrated Product Teams (WIPT). To prepare the NSIPS ORD, a Requirements WIPT was stood up. WIPT members were from all organizations normally involved in the Navy's weapons ORD approval process, and other Navy and DoD organizations impacted by the NSIPS program. The NSIPS team tailored the Navy's weapons ORD approval process for AIS programs. The first Requirements WIPT was held in mid August 96. Prior the first Requirements WIPT meeting, the PMO staff and CNO sponsor spent two days preparing a draft ORD for review by the WIPT. After three days of meetings within the Requirements WIPT, a finished product was ready for formal review within the Navy.

What were the results and lessons learned in developing this improvement?

Results: Comments received from IPT represented organizations during the formal review were minimal and easy to resolve. A few comments were received from organizations not represented on the Requirements IPT. Their comments were more difficult to resolve but not insurmountable.

Lesson learned: Ensure all organizations impacted by the program or influencing approval of the ORD participate in the WIPT. Had all organizations participated in the NSIPS Requirements WIPT, the total time for final approval could of been reduced another two months. Some organizations reviewing the ORD were seeing it for the first time. They were making recommendations that had been addressed in the WIPT and resolved to everyone's satisfaction.

What other information would help another program evaluate its applicability towards their program?

Other programs are welcome to visit SPAWAR's PMW 153, the NSIPS Program Management Office, to discuss the lessons learned from this initiative.

RISK MANAGEMENT

Risk Management

PEO–SCS 703/602–2015 dsn 332–2015 – phone
Palmer, CDR Scott 703/602–0269 – fax
UHF Follow-on (UFO) palmers@spawar.navy.mil
PMW 146C
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
Communications Satellites Program Office (PMW 146), PEO–SCS

What is the name of your new idea, approach, process innovation, or lesson learned?
Lesson Learned: Government/Contractor Program Risk Assessment Integrated Product Teams.

Give a description of this idea and how it fits in the program:
Established a program risk assessment IPT between the contractor and the program office to identify technical and programmatical risk areas. The IPT categorizes risk elements by subject area, probability of occurrence, program impact, develops detailed mitigation plans and criteria for closure. The overall risk assessment must be agreed upon by both program and contractor management. Risk assessment elements then are tracked on a periodic basis to ensure risk reduction and closure actions occur in a timely fashion.

How is it innovative and creative?
Formation of the IPT and a structured risk assessment and reduction process allows contractor and program office management, contractual and technical personnel input and ownership of the risk management process. Previously risk assessments have been done either unilaterally by either the contractor or the government or an independent agency. This method does not always allow for an agreed upon mitigation process.

How has this new improvement been applied?
PMW 146, SPAWAR and Hughes Space and Communications used this method to assess overall program risk at the beginning of the non-recurring engineering and design phase in the implementation of a Global Broadcast Service on the last 3 production UFO satellites.

What were the results and lessons learned in developing this improvement?
Using the IPT process to assess the overall program risk and develop mitigation plans and closures had two major results. First, program managers had a firm understanding of each risk element, either technical or programmatic, and its impact on program success. They were able to use the mitigation plans and periodic, in this case weekly, progress reports to make timely programmatic decisions. This provided flexibility to the contractor in meeting key milestones. By having the IPT and subsequent working level IPTs take ownership of risk elements and mitigation plans, the contractor was able to focus resources on high impact risk elements and solve many of the design problems and trades early in the process. Unambiguous closure criteria helped maintain the focus on what was required to reduce risk both at the management and working levels.

What other information would help another program evaluate its applicability towards their program?
For this process to work successfully, all parties must be frank in identifying risk elements, determining impact and developing obtainable risk closure criteria. Ownership of the risk elements and their closure by working level IPTs enables the process to be part of the production and design effort. This process cannot be as successful if overlaid on the process by management.

SERVICE LIFE EXTENSION

Service Life Extension

NAVSEA 703/602–8515 – phone
Neily, CAPT (Sel) Dave 703/418–1163 – fax
LCAC Acquisition Management NEILY_DAVE_CDR@HQ.NAVSEA.NAVY.MIL
PMS377J
2531 Jefferson Davis Highway
Arlington, VA 22242

What program are you with?
Landing Craft, Air Cushion

What is the name of your new idea, approach, process innovation, or lesson learned?
Avoid costly replacement of landing craft by extending the service life of the current platforms.

Give a description of this idea and how it fits in the program:
Completion of the 20 year design service life LCAC normally would prompt the requirement for procurement of a new replacement craft, an expensive proposition, as these craft cost an average of $25M per hull. A study was conducted of the life limiting features of the platform, revealing corrosion and obsolete electronics as principle drivers. The study also revealed that current technologies applicable to aluminum hull repair and corrosion resistant coatings could be applied to cost effectively extend the life of the hulls. Additionally, current COTS electronic hardware could replace obsolete hardware, eliminate the costly repair and maintenance of the current suite while providing increased capabilities at the same time.

How is it innovative and creative?
The process is innovative and creative in that, in a very short development cycle, utilizing acquisition reform guidelines of performance specs and industry involvement, a cost effective solution to providing LCAC availability to the fleet for an extended period of time was achieved.

How has this new improvement been applied?
A Service Life Extension Program for LCAC was funded for development in FY96, with full implementation across the fleet being budgeted in follow years.

What were the results and lessons learned in developing this improvement?
Current technology can be cost effectively applied to extend the useful life of Naval assets.

What other information would help another program evaluate its applicability towards their program?

SINGLE PROCESS INITIATIVE

Single Process Initiative

NAVAIR 703/604–2860x8747 – phone
Brady, Lee703/604–2405 – fax
AN/ALE–50 Advanced Airborne Expendable Decoy Bradylc.ntrprs@navair.navy.mil
PMA272D1
PEO(T)/PMA272
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: AN/ALE–50 Advanced Airborne Expendable Decoy

What is the name of your new idea, approach, process innovation, or lesson learned?
Single Process Initiatives (Block Changes)

Give a description of this idea and how it fits in the program:
The thrust of block changes is to review all processes used by a single company and to look for areas where a single process can be substituted for multiple processes which accomplish the same thing but are required by different government contracts.

How is it innovative and creative?
When a contractor identifies a single process he wishes to use on all government contracts, each customer has to evaluate the process. If all the customers who have contracts with Raytheon agree, then the Associate Contracting Officer (ACO) at Raytheon will modify all Raytheon contracts to require the single process. The ACO will also negotiate equitable adjustment for making the change.

How has this new improvement been applied?
We are still in the middle of this process. Raytheon has submitted 14 block changes. The management council has recommended approval of 12 of these. Currently we are polling the government customers for their comments. Eventually, I believe that most of the 14 will be approved. It remains to be seen whether or not any significant savings will accrue to the government. Most of the block changes proposed have said that there was little to no cost savings, but I consider this just the contractor's initial negotiation position. If there were no savings, he would have no reason for submitting the block change proposal in the first place.

What were the results and lessons learned in developing this improvement?
Still too early to tell yet.

What other information would help another program evaluate its applicability towards their program?
Each program should be aware of other contracts which their contractor may have with other government agencies. Deletion of redundant processes in favor of a standard process to achieve the same result should save money.

Single Process Initiative

NAVAIR 703/604–2100x5518 – phone
Jensen, Colin 703/604–2896 – fax
Sparrow AIM/RIM–7P JENSENCW@AM@JFK
PMA–259

PEO(T)/PMA–259
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
Sparrow Missile

What is the name of your new idea, approach, process innovation, or lesson learned?
Single Process Initiative

Give a description of this idea and how it fits in the program:
Block Mods have been established with both of our prime contractors to implement contractor and industry specific processes for process uniformity between various programs.

How is it innovative and creative?
This transfers, to the contractors, much of the responsibility for how they do their business. In the past, government specs and contract specific language have defined processes to be used for the production of each specific program. This has led to a single contractor having to implement and train many different variations of similar processes.

How has this new improvement been applied?
The single process initiative has been implemented via a block mod with each of the contractors specifying the new process to be used for all DOD programs.

What were the results and lessons learned in developing this improvement?
This is a fairly new innovation and as such has not been time tested. The results should be seen in the pricing on future contracts, and in greater conformity between programs. There should also be time and cost savings benefits to the government in terms of things like less government calibration oversight and contractor Class II ECP authority.

What other information would help another program evaluate its applicability towards their program?
N/A

Single Process Initiative

NAVAIR 703/604–2210x7459 – phone
Kurtz, Ms. Carol 703/604–2619 – fax
F/A–18C/D Kurtzca.nimitz@navair.navy.mil
PMA265G
PEO(T)/PMA265
1425 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
F/A–18C/D

What is the name of your new idea, approach, process innovation, or lesson learned?
Process innovation for Processing of General Electric Aircraft Engines (GEAE) Single Process Initiatives (SPIs)

Give a description of this idea and how it fits in the program:
Industry submits a proposal to replace or eliminate a MIL–Spec or Standard, normally proposing to replace it with a commercially or company accepted process. The Defense Contract Management Command (DCMC) office located at the contractor facility receives the company proposal and

determines whether it makes sense for the services to review and consider. If so, DCMC forwards each proposal to the Component Leads for processing. Each Component Lead provides a service position to DCMC. (We are the Component Lead for GEAE and Northrop Grumman, El Segundo SPIs.) DCMC manages any disagreements between the services with formal meetings or conference calls. When the services are in agreement to accept a proposal, the Administrative Contracting Officer (ACO) drafts contract changes and provides the wording to the Component Leads for review. The process goal is 120 days from proposal submittal to contract modification.

How is it innovative and creative?

When designated as the Navy Lead for GEAE SPIs on 17 May 1996, we inherited seven proposals for which Navy responses were delinquent. To ensure that all Navy customers' views were adequately represented, we performed a process re-design effort to determine the most effective method for reviewing, coordinating, and providing the Navy position for GEAE proposals. The new approach utilizes technology to effectively integrate all affected programs in all affected Navy Commands.

How has this new improvement been applied?

When USN receives the proposal from DCMC, the Navy Lead assigns a "subject matter expert to review the proposal and provide a technical recommendation. We consider the recommendation and forward a proposed Navy position by e-mail to the affected program offices and other commands for their input. If an agreement is reached within the Navy, we provides the Navy position to DCMC. We provide a detailed weekly status of the block change proposals, via e-mail, to all Navy programs potentially affected.

What were the results and lessons learned in developing this improvement?

GEAE has now submitted 27 proposals. 13 of these proposals are already under contract and 1 has been disapproved. Our process has been described as a "model process" by others in NAVAIR and DCMC. We learned early on that it is essential to involve all stakeholders early and throughout the process. Another lesson learned is that the Component Lead must clearly define the roles and responsibilities of all process participants.

What other information would help another program evaluate its applicability towards their program?

Break up the 120 day cycle into discrete, measurable, and agreed-on time frames. Apprise all stakeholders of the status of each proposal at least once/week. Ensure that all individuals involved in the SPI process (participants and customers) understand that the 120 days is a goal; the most important goal is to ensure that the block change proposals do not degrade the quality of the systems that we provide to the Fleet.

SOFTWARE REUSE

Software Reuse

SPAWAR 703/602–2747 – phone
Bachmann, USN, CAPT Michael C. 703/602–5207 – fax
Naval Tactical Command Support System (NTCSS) bachmanm@smtp–gw.spawar.navy.mil
PMW 151
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
Naval Tactical Command Support System (NTCSS).
Space & Naval Warfare Systems Command (PMW 151).

What is the name of your new idea, approach, process innovation, or lesson learned?
Process Innovation: NASA utilization of NTCSS, Naval Aviation Logistics Command Management Information System (NALCOMIS) software.

Process Innovation: Software ReUse was successfully employed to facilitate a rapid development and deployment of software applications required by NASA Johnson Space Center.

Give a description of this idea and how it fits in the program:
NTCSS NALCOMIS applications were developed utilizing a Commercial Off The Shelf fourth generation language utility. NASA personnel looked for over 2 years to identify applications that would satisfy their aircraft support requirements. Their search involved both the commercial and DOD sectors. Software ReUse was proposed as a solution to their requirements by SPAWAR's NTCSS Program Office, and, field activity – Navy Management Systems Support Office (NAVMASSO).

How is it innovative and creative?
Utilizing existing NTCSS NALCOMIS software code and associated software utilities, NAVMASSO successfully captured NASA's functional requirements and in minimal time developed an application that satisfied an urgent NASA functional requirement.

How has this new improvement been applied?
Application installation and associated training is being conducted at NASA Johnson Space Center, Houston, at this time.

What were the results and lessons learned in developing this improvement?
COTS Software development tools have advanced significantly over the past several years and have demonstrated that Software ReUse is an invaluable tool for accelerating application development/deployment in support of the Federal Government.
What other information would help another program evaluate its applicability towards their program?
Other Programs are welcome to visit SPAWAR's PMW 151 Program Office, and Software Development Activity, NAVMASSO to examine the employment of COTS utilities for the purpose of accelerating software development.

Software Reuse

NAVAIR 703/604–3180x2644 – phone
Hudson, Ms. Deana 703/602–3515 – fax
GPS CDNU Software Reuse Initiative husdsonk.nimitz@navair.navy.mil

PMW/PMA–187/AIR 4.5.7
Naval Air Systems Command
1421 Jefferson Davis Highway
Arlington, VA 22243

What program are you with?

The Global Positioning System (GPS) managed by the Navy GPS Program Office within the Space and Naval Warfare Systems Command (SPAWAR) Navigation Systems Program Code PMW/PMA–187.

What is the name of your new idea, approach, process innovation, or lesson learned?

GPS Control Display Navigation Unit (CDNU) Software Reuse Initiative

Give a description of this idea and how it fits in the program:

The CDNU is a common avionics system that allows the installation of GPS in Naval Aircraft. The CDNU serves as a MIL–STD–1553 Digital Data Bus Controller which forms the backbone of the avionics architecture for GPS aircraft integration. The CDNU performs area navigation calculations and provides an output of flight data for tactical missions as well as flight in the national airspace system (NAS). As non-recurring design efforts progressed it was discovered that existing cockpit control heads could be removed to free up cockpit space (reducing weight and costs) and the CDNU could perform these same control functions via software. The CDNU baseline Computer Software Configuration Item covered common software requirements across multiple platforms. Identification of additional functional requirements, for example radio control, required development of additional software modules to perform these functions.

How is it innovative and creative?

As new platforms are identified for integration, requirements analysis determines the optimal approach for reusing existing software modules either as-is or with minor modifications or developing new software modules. These new and/or reused modules are then integrated with the common baseline CSCI and a new aircraft CDNU Operational Flight Program is established. This extremely successful reuse approach saves cost and reduces software development times to previously unachievable levels. The baseline also evolves and improves as deficiencies are corrected and new requirements are established. The CDNU is the cornerstone for providing Non-Precision approach capability in the near future and Precision Approach capability when developed.

How has this new improvement been applied?

Original CDNU users were — P–3, C–130, C–2, UH–1, CH–46, CH–53 (1,049 aircraft, 20 type/model/series (T/M/S)). This innovative process allowed CDNU use to grow to include front line tactical platforms — F–14A/B, EA–6B, S–3B, (497 aircraft, 6 T/M/S) — that were never envisioned to be CDNU users at the start of the program. Additional aircraft plan to join the ranks of CDNU users increasing the benefit of this innovative approach (including the USAF F–117). The initiative also is embraced by all of the activities, both government and contractor, that are currently developing CDNU software.

What were the results and lessons learned in developing this improvement?

75% reduction in development cost/schedule. CH–53 achieved development of working software in 5 months for $160K. Comparable cost and schedule without reuse would have been greater than 12 months/$500K.

44% Module commonality between UH–1N and CH–46. Actual software commonality is closer to 85% because software functions are common, but input/output is different between similar avionics systems.

Extension of Application (EOA) on similar avionics architectures within a T/M/S has allowed additional savings from decreased testing requirements. (S–3B is EOA of the C–2A)

34% of Naval Aviation will benefit from this approach as the CDNU/reused software becomes the centerpiece of the avionics system for 1,596 aircraft.

Lessons learned on this program focus around the benefits of a well planned acquisition of a piece of common avionics. Use of common interfaces which were specified in the system specification and a modular software design greatly increase the utility of a single system. Good effective engineering and innovation in the application of technology can reap tremendous benefits as well as save significant amounts of funding and compress schedules.

What other information would help another program evaluate its applicability towards their program?
This approach could be applied directly to other services (Army, Air Force) who are using the CDNU as the backbone of their GPS avionics integration architecture. Software modules are maintained in configuration control and the accompanying software documents which detail the requirements for each integration are maintained by the Naval Air Warfare Center, Aircraft Division. These modules and documentation can be made available for use by the other services to assist them in gaining the benefits of this initiative. Cost and schedule savings can be realized almost immediately by programs who are using the CDNU. Even if the exact software module doesn't exist for a particular piece of avionics, existing modules can be readily modified, in most cases, to meet the functional requirements for similar avionics, such as radios, electronic navigation aids, and IFF controls.

Software Reuse

NAVAIR 703/604–0885x3601 – phone
Svecz, Michael 703/604–0854 – fax
Pioneer UAV svecz@lan–email.peocu.navy.mil
AIR 4.1.1.2 UAV
1213 Jefferson Davis Hwy.
Arlington, VA 22246

What program are you with?
Pioneer Unmanned Aerial Vehicles, PMA–263

What is the name of your new idea, approach, process innovation, or lesson learned?
Pioneer Digital Mapping System (PDMS) Development

Give a description of this idea and how it fits in the program:
The Pioneer UAV controls an aerial vehicle from a Ground Control Station (GCS). Within the GCS is a plotter system which allows the controller to keep track of the UAV position. The current plotter is no longer manufactured and is becoming unsupportable. The PDMS provides a digital replacement for this component.

How is it innovative and creative?
The creative aspect of this program is in its re-use of government software. While this is not a new idea, the PDMS is a good example of this technique.

How has this new improvement been applied?
PMA–263 used the Naval Research Lab (NRL) as the software developer. NRL essentially developed an application for Pioneer using DMA Muse, existing government software, as the underlying software. The final product can be hosted on any Windows capable computer.

What were the results and lessons learned in developing this improvement?

The results so far is that the PDMS has successfully completed flight test. The total development cost was significantly less expensive than the initial bid the program received from the prime contractor.

Lessons learned include:

- reusable software cuts costs, even after the application construction.
- organic software developers are more flexible than contracted developers
- early involvement of the user in defining requirements was critical
- stay focused on requirements and do not allow requirements creep during software development

What other information would help another program evaluate its applicability towards their program?
Reusable software helped hold the costs down in this development, but classic systems engineering (requirements identification and allocation) made this development successful.

STATEMENT OF OBJECTIVES (SOO)

Statement of Objectives (SOO)

NAVIAR 703/604–2860x8768 – phone
Shea, Debra 703/604–2405 – fax
Joint Emitter Targeting System (JETS) sheadl.ntrprs@navair.navy.mil
PMA0272B4
PEO(T)/PMA272B4
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: Joint Emitter Targeting System (JETS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Statement of Objectives (SOO)

Give a description of this idea and how it fits in the program:
A Statement of Objectives (SOO) defines in a very concise format the objectives or goals for the contractor's tasks in the design, development, test and integration of the system. It will eliminate the "HOW TO" and focus instead on the "WHAT."

How is it innovative and creative?
In the past, we have specified how contractors should perform their work in an EMD contract. Using the SOO, contractors with varying approaches can propose their own SOW thus allowing more flexibility.

How has this new improvement been applied?
We will release a SOO with a Request for Information. Potential contractors will be asked to respond with comments to the SOO and a draft Statement of Work (SOW). A modified SOO will then be released with the RFP (Request for Proposal).

What were the results and lessons learned in developing this improvement?
We are currently drafting a SOO for release with an RFI so the improvements are not visible yet.

What other information would help another program evaluate its applicability towards their program?

SYSTEMS ENGINEERING

Systems Engineering

NAVSEA 703/602–7280 – phone
Obert, Kathy 703/602–5998 – fax
Aircraft Carrier Program Office obert_kathleen_c@hq.navsea.navy.mil
PEO CLA (PMS 312)
Naval Sea Systems Command
Jefferson Davis Highway
Arlington, VA 22242–5160

What program are you with?
Aircraft Carrier Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Integrated Communications and Advanced Networks (ICAN)

Give a description of this idea and how it fits in the program:

Integrated Communications and Advanced Networks (ICAN) is an acquisition strategy and systems integration process which utilizes NDI and COTS technology to integrate voice and data systems. ICAN builds upon a passive fiber optic cable plant, which has already been designed into the ship and will accommodate high volumes of information.

ICAN will be implemented on CVN 76 as a change (HMR–10) to the existing ship contract. For CVN 76, ICAN replaces the existing voice systems (Dial telephones, Intercoms, announcing systems, sound powered phones and Radio Room Interfaces), Navigation & Ship Control Systems, Machinery Control Systems (Alarms, Vent Control Fans, JP–5 systems) and Administrative Networks.

CVN 68 will receive a more limited version of ICAN during the upcoming RCOH. The extent of ICAN on CVN 68 will be to install voice, navigation distribution and possibly control and indication upgrades. CVN 68 already has a fiber optic backbone and will be receiving the Fiber Optic Cable Plant (FOCP) installation as part of the RCOH.

An acquisition strategy is being developed to backfit ICAN on the remaining carriers.

How is it innovative and creative?

A major tenet of ICAN is the open architecture design philosophy that provides a physical infrastructure composed of signal and power transmission media, equipment racks and an uninterruptable power supply (UPS). The ICAN switching, routing, control and UPS equipment will be physically collocated in a series of centralized equipment locations known as node rooms. Our goal is to have a single, fully integrated and survivable communications core network that will accommodate growth throughout the life of the ship. Elements of system configuration and management, security and survivability are incorporated onto every layer of the architecture to ensure network integrity throughout all conditions of operation. Because ICAN is based on NDI and COTS hardware and software, user workstations can effectively and economically meet requirements for distributed multimedia communications.

While the ICAN vision is a "top down" approach, the systems engineering is being conducted from the "bottom up" to ensure the end user needs are the driving force in system design and integration. Because of the evolving nature of the technology employed by ICAN and the constraints of adding such a major change to an existing ship contract, the core engineering and the contract administration of the change are being done concurrently. The CVN 76 ICAN Execution Plan, which was made part of the CVN 76 contract with the signing of HMR–10, precludes the need for

up-front specification changes and drawings. Instead, the process laid out in the Execution Plan, allows changes to the CVN 76 ship specifications and drawings to be made later via a "no cost" change process as engineering decisions are made.

To successfully accomplish the goals of ICAN, PEO CLA and NAVSEA are utilizing an Integrated Product and Process Development (IPPD) approach. Participants on the ICAN IPPD team include the Navy's ship design organization, the shipbuilder (Newport News Shipbuilding) and over 21 other commercial companies working together to develop and implement and execution plan to design, test, validate and integrate ICAN.

How has this new improvement been applied?
HMR–10 was signed on 16 January 1997 to implement ICAN on CVN 76. ICAN is being planned for CVN 68 as part of the upcoming RCOH.

What were the results and lessons learned in developing this improvement?
ICAN resolves a two decade Naval problem in solving voice integration issues (many other programs attempted and failed).
Utilizing integration contractors to deal with vendors, avoids many government contracting limitations and takes advantage of the differential between government and contractor pricing lists.
The importance and value of IPTs outweighs the costs; however, close monitoring and management of IPT efforts is essential to their success.
Involve the logistics support team early in the process.

What other information would help another program evaluate its applicability towards their program?
It should be emphasized that the need for integrated communications is not restricted to aircraft carriers, but is in fact a Fleet-wide requirement essential to support command, control, and communications needs into the 21st century. It is in the best interest of the Navy to consolidate communications systems procurements among the various ship program offices, and pursue a common solution for a common problem. A competitive acquisition is being prepared to implement ICAN-like systems across ship lines.

Systems Engineering

MARCOR 703/784–2006x2719 – phone
Castellvi, Maj Bob703/784–5842 – fax
USMC Predator SRAW Program castellvi4@mqg–smtp3.usmc.mil
CBG
2033 Barnett Ave., Suite 315
Quantico, VA 22134

What program are you with?
USMC Predator Short Range Anti-Armor Weapon (SRAW)

What is the name of your new idea, approach, process innovation, or lesson learned?
Modular Design to Increase Production Volume

Give a description of this idea and how it fits in the program:
The Predator missile has been designed to allow the use of multiple warheads carried by a common propulsion and guidance system. This modularity has allowed propulsion and guidance system R&D to support both a Marine Corps and an Army program, reducing development costs and increasing the production volume.

How is it innovative and creative?

By coordinating the development requirements of two missile programs, we have reduced R&D time and money, and reduced procurements costs as a result of greater production volume.

How has this new improvement been applied?
The Marine Corps, as lead service has coordinated with the U.S. Army's Multi-Purpose Improved Munition (MIPM) missile program to ensure that their requirements for propulsion and guidance are considered during development. Procurement will be coordinated to reduce costs where ever possible.

What were the results and lessons learned in developing this improvement?
This plan has resulted in a shortening of program schedule and a decrease in planned production costs for both programs.

What other information would help another program evaluate its applicability towards their program?
Information on program systems engineering processes and on missile components used is available from the program office.

Systems Engineering

NAVSEA 703/602–3476x332 – phone
Cole, Barry 703/602–6169 – fax
AEGIS Shipbuilding cole_barry@hq.navsea.navy.mil
PMS 400D32
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5165

What program are you with?
AEGIS Shipbuilding, PMS 400D.

What is the name of your new idea, approach, process innovation, or lesson learned?
Statistical process control (SPC).

Give a description of this idea and how it fits in the program:
SPC is a way to measure ship construction process performance, identify causes of variation, and implement process improvements.

How is it innovative and creative?
This is the first Navy shipbuilding program to have a requirement for process performance reporting tailored to ship fabrication, engineering, and testing processes.

How has this new improvement been applied?
It was first invoked in the 1992 shipbuilding contracts. The key program elements are two CDRLs; an SPC Implementation Plan, in which the shipbuilder identifies the processes to be monitored, and quarterly SPC reports that show results.

What were the results and lessons learned in developing this improvement?
Cost savings have resulted from reduced rework during fabrication and construction. Although resistant at first, the shipbuilders now understand and use process performance data to identify problem areas and introduce improvements. One yard has used SPC data to predict weld shrinkage and reduce rework at fit up. Another identified a lack of machine capability and invested in a better bending machine.

What other information would help another program evaluate its applicability towards their program?
Ask the contractor to show his process performance data. If it is lacking, does not show improvement, or does not address those processes thought to be important by the program manager, SPC CDRLs would be applicable.

Systems Engineering
NAVSEA 703/602–2715x167 – phone
Deligne, William J. 703/602–5998 – fax
Aircraft Carrier Program Deligne_Bill@HQ.NAVSEA.NAVY.MIL
PMS 312AB
Naval Sea Systems Command
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5160

What program are you with?
Aircraft Carrier Program, PEO CLA (PMS 312)

What is the name of your new idea, approach, process innovation, or lesson learned?
Air Blown Fiber Optic Cable Plant

Give a description of this idea and how it fits in the program:
In order to move voice, video, and data throughout a navy ship, a transmission medium is necessary. Currently, the most efficient means is fiber optic cable. Fiber optics is lightweight and provides the necessary capacity to transmit voice, video, and data. Traditional fiber optic cable plants contain strategically placed interconnection boxes/patch panels connected together by multiple runs of 8 strand mil–std fiber optic cable. An air blown fiber (ABF) optic cable plant also consists of interconnection boxes, however, the boxes are connected by multiple tubes. Up to four specially coated strands of fiber can be blown into each tube as needed.

How is it innovative and creative?
ABF is a new technology being inserted into ongoing shipbuilding contracts (CVN 75 and 76) for the first time. The ABF fiber optic cable plant installation will reduce life cycle costs associated with adding fiber to the ship throughout its service life and allow new fiber optic technology to be inserted into the ship at a much reduced cost. The reconfigurable tube plant associated with ABF will allow light loss to be more effectively managed.

How has this new improvement been applied?
The CVN 75 is the first shipboard application of this technology and will be onboard at ship delivery.

What were the results and lessons learned in developing this improvement?
Life cycle management and logistics support of a new COTS based technology must be considered from the beginning.

What other information would help another program evaluate its applicability towards their program?
British Telecom holds the patent rights for ABF technology. British Telecom has licensed only two companies to market and sell ABF systems: BICC/Bran Rex (a British company) and Sumitomo (a Japanese company). Based on studies by Newport News Shipbuilding (NNS), BICC/Bran Rex is the recommended supplier of an ABF system. Naval Surface Warfare Center (Carderoc Division) is also currently evaluating both systems.

Systems Engineering

NAVSEA 703/602–3097 – phone

Hess, H. Lee 703/602–6683 – fax
Coast Guard Polar Icebreaker Hess_Lee@hq.navsea.navy.mil
NAVSEA PMS373
2531 Jefferson Davis Hwy.

What program are you with?
Coast Guard Polar Icebreaker (WAGB 20)

What is the name of your new idea, approach, process innovation, or lesson learned?
Special Studies for Ship Detail Design and Construction

Give a description of this idea and how it fits in the program:
This is a line item in the shipbuilding contract that allows the assignment of work task authorization for engineering analysis and scoping of emerging design alternatives. The Polar Icebreaker is a performance based specification which introduces the possibility of several design solutions. In the event that an alternate design solution may present a more appealing approach, this provides a means of quickly determining its feasibility and suitability.

How is it innovative and creative?
It provides a timely and cost effective means of assessing alternatives so that the design process experiences minimum disruption.

How has this new improvement been applied?
Nine special studies have been initiated since the inception of the contract.

What were the results and lessons learned in developing this improvement?
This has enabled us to make needful improvements to the design without the added delay that accompany the standard ECP process.

What other information would help another program evaluate its applicability towards their program?
Difficult to assess. This is asking us to know the unknown.

TAILORING DOCUMENTATION

Tailoring Documentation

NAVAIR 301/342–3688x118 – phone
McIlhenny, Kenneth 301/342–3674 – fax
IBIS
PMA2251C
Bldg 420B
47114 Hinkel Circle, Unit #2
Patuxent River, MD 20670–1629

What program are you with?
H–3

What is the name of your new idea, approach, process innovation, or lesson learned?
Use of tailoring in the preparation of acquisition program documentation

Give a description of this idea and how it fits in the program:
Use of tailoring in the preparation of acquisition program documentation to meet the requirements of DOD 5000.2 has significantly reduced the administrative burden in execution of ACAT IV programs.

How is it innovative and creative?

How has this new improvement been applied?
Tailoring was used extensively in obtaining a program decision for the H–3IBIS program

What were the results and lessons learned in developing this improvement?
That a program could be executed expeditiously with minimum risk, with proper tailoring of the documentation.

What other information would help another program evaluate its applicability towards their program?
Installation of previously qualified equipment on another platform can be executed expeditiously and comply with 5000.2 requirements if the documentation requirements are appropriately tailored.

Tailoring Documentation

NAVSEA 703/602–8134x101 DSN 332–8511 – phone
Woodson, CDR Steve 703/418–1163 – fax
AN/KSQ–1 and PLRS woodson_steve@hq.navsea.navy.mil
PMS377
Program Executive Office PMS377W
Carriers, Littoral Warfare and Auxiliary Ships
2531 Jefferson Davis Highway

What program are you with?
Amphibious Warfare (PMS377)

What is the name of your new idea, approach, process innovation, or lesson learned?
Tailoring the Integrated Program Summary (IPS).

Give a description of this idea and how it fits in the program:
By decision of the MDA at LRIP it was agreed that the AN/KSQ–1 IPS could be tailored:

- Combining the Acquisition Plan with the Acquisition Strategy Report.
- Deleting the requirement for the Risk Assessment.

How is it innovative and creative?
This approach recognizes that with no loss in quality the preparation and coordination time is significantly reduced.

How has this new improvement been applied?
This idea was applied at the AN/KSQ–1 Milestone III decision point.

What were the results and lessons learned in developing this improvement?
Preparation and staffing was completed in four months. The significant lesson learned was that the Programmatic Environmental Analysis (PEA) tended to be overly bureaucratic in view of the major non-development item aspect of the program.

What other information would help another program evaluate its applicability towards their program?
None.

TEAM MAINTENANCE

Team Maintenance

NAVAIR 703/604–2540x4827 – phone
Mitchell, Fleetwood 703/604–2490 – fax
EA–6B EFIS mitchellf.ntrprs@navair.navy.mil
PMA–2344
1421 Jefferson Davis Highway
Arlington, VA 22243–5120

What program are you with?
EA–6B Electronic Flight Information System (EFIS)

What is the name of your new idea, approach, process innovation, or lesson learned?
Procurement of the EFIS hardware through use of Commercial Off The Shelf (COTS) and installs by teaming of "O" and "D" Levels of Maintenance.

Give a description of this idea and how it fits in the program:
The EFIS is a replacement for the unreliable Attitude Direction Indicator (ADI) system which poses a safety of flight problem for EA–6B aircraft. Although the ADI replacement system was to be part of the Block–89A Upgrade, the safety of flight issue required an earlier replacement. Accordingly, procurement of the EFIS through COTS was determined to be the most cost-effective way to procure the requirement. The design of the EFIS was a joint effort with the NADEP CFA and the testing activities. The installation kits were manufactured by NADEP JAX. Installation of EFIS centers on employing multiple approaches. One is a sharing of the installation with the Miniature Airborne GPS Receiver (MAGR) and concurrent SDLM/other modification programs. Another is a teaming arrangement with "O" level personnel assisting Field Modification Teams to enable the aircraft to be returned to an operationally ready status in minimum time.

How is it innovative and creative?
This program used COTS equipment and shared installation responsibilities to make the effort affordable.

How has this new improvement been applied?
To accomplish installation of EFIS in minimum time and the most efficient manner, EFIS is being installed at: (a) NADEP JAX concurrently with aircraft undergoing SDLM; (b) Northrop Grumman Aircraft Corporation under a separate modification program and commercial SDLM program; and (c) by an FMT from NADEP North Island, assisted by Navy squadron personnel at NAS Whidbey Island. An additional effort by an FMT from NADEP Jacksonville will start on 24 Feb 97 at MCAS Cherry Point. They will be assisted by the co-located Marine squadron personnel.

What were the results and lessons learned in developing this improvement?
Northrop Grumman has produced two EFIS-equipped EA–6B aircraft and has six in process. NADEP North Island's FMT and Navy squadron personnel have completed installation of three EFIS and have four in process. NADEP Jacksonville has installation of one EFIS in process concurrent with an aircraft moving through SDLM and will start installs with Marine squadron personnel in Feb 97. The teaming of "D" and "O" level maintenance has shown that it is: (a) cost effective; (b) reduces work loading; and, (c) provides the fleet with a safe deployable aircraft. Accomplishing multiple modification installations has also resulted in cost avoidance. Installation concurrent with aircraft moving through SDLM has rendered similar results. These concepts have reduced cost and minimized aircraft out of service time.

What other information would help another program evaluate its applicability towards their program?

Communicate the lessons-learned from execution of the EFIS Program to all potential users to effect an exchange of ideas and provide information which is not readily apparent.

TEAMING – COST ANALYSIS

Teaming – Cost Analysis

NAVAIR 703/604–3611x2520 – phone
Moore, Jill A. 703/604–3723 – fax
Joint Standoff Weapon (AGM–154) mooreja.nimitz@navair.navy.mil
AIR–4.2.3
PEO(T)/AIR–4.2.3
1421 Jefferson Davis Highway
Arlington, VA 22243–5210

What program are you with?
PMA–201; Joint Standoff Weapon

What is the name of your new idea, approach, process innovation, or lesson learned?
JSOW Baseline Program Cost Analysis Improvement Group (CAIG) review for first LRIP DAB decision

Give a description of this idea and how it fits in the program:
JSOW Baseline Program Cost Analysis Improvement Group (CAIG) review for first LRIP DAB decision

How is it innovative and creative?
By stressing the teaming aspect, rather than a series of independent reviews, we were able to address potential issues early and at the working level, and thus avoid major disconnects during the CAIG review.

How has this new improvement been applied?
The Cost Focus Team was set up by the Working-Level IPT with membership from each stake-holder in the CAIG review process, led by PMA–201's cost team leader.

What were the results and lessons learned in developing this improvement?
Participation by cost estimators and early buy-in from the Navy and Air Force independent cost analysis agencies (NCCA, AFCAA) avoided the need for separate reviews. Open sharing of methodology and data with the OSD cost analysts led to a better understanding of our program and a successful CAIG review.

What other information would help another program evaluate its applicability towards their program?
Applicability would depend upon a true teaming mindset at the working level by OSD, the PMA, and NCCA. Strong support and backup by the PMA to embrace this streamlined approach to the DAB milestone is required. The ACAT and visibility of the program, coupled with the approaching milestone level would influence the size of the Cost Focus Team.

TEAMING – DESIGN REVIEWS

Teaming – Design Reviews

NAVSEA 703/604–6052x551 – phone
Barns, Mr. Charles 703/604–6056 – fax
MK30 Mod 2 ATS Program barns_charles@hq.navsea.navy.mil
PMS403C3
2011 Crystal Drive, Suite 817
Arlington, VA 22242

What program are you with?
MK30 MOD 2 ASW Training Target System (ATS) Program

What is the name of your new idea, approach, process innovation, or lesson learned?
Streamlined Design Reviews in D&V Contract

Give a description of this idea and how it fits in the program:
Design reviews where the Government participated in the contractor's internal design review process in lieu of classical MIL–STD–1521 reviews. To streamline the review and approval process, the contractor held meetings prior to internal design reviews to describe the design to the Government and have the Government provide feedback.

How is it innovative and creative?
Configuration control resided with the contractor during D&V. government oversight was achieved by attending Baseline Change Proposal (BCP) and Configuration Control Board meetings and reviewing Investigation Requests and Engineering Change Orders. This approach was pursued to incorporate design changes more easily and expediently without Government approval cycles. Refinements were expected because the baseline was developmental. This approach instilled baseline maintenance and updating responsibilities on the contractor.

How has this new improvement been applied?
See response 4.

What were the results and lessons learned in developing this improvement?
Costs were reduced by residing these activities at the design activity. The government and contractor collaborated and partnered to achieve results and program goals. Growing pains were there but commitment was first and foremost. It was the key to the success of this improvement.

What other information would help another program evaluate its applicability towards their program?
Many defense contractors are not used to this type of reform. You MUST be able to live with the exact performance you specify (not what you thought you specified or wanted to specify, etc.).

TEAMING – PROGRAM REVIEW

Teaming – Program Review

NAVAIR 703/604–2060x4806 – phone
Yen, Mr. Tu-Hsien 703/604–2613 – fax
UNFO YENT.NIMITZ@NAVAIR.NAVY.MIL
PMA–200
1421 Jefferson Davis Hwy.
Arlington, VA 22243

What program are you with?
Joint Navy/Air Force Undergraduate Flight Officer (UNFO) Training System

What is the name of your new idea, approach, process innovation, or lesson learned?
Formal Teaming Arrangement with Contractor

Give a description of this idea and how it fits in the program:
We envision a teaming arrangement where the contractor allows Gov't access to contractor's internal meetings and review, even meetings with its subcontractors, that are conducted for the Gov't procurement program. This Gov't access also extends to having internal documentation available to Gov't review.

How is it innovative and creative?
With the teaming arrangement, instead of the contractor conducting its own internal meetings, reviews, etc., and then reporting to the Gov't with a separate round of meetings, the contractor's internal meetings and the meetings with the Gov't are combined to eliminate duplication of efforts.

How has this new improvement been applied?
We are still working with the contractor to definitize the teaming arrangement for the sole source procurement of the T–39N aircraft, associated Ground Based Training System, and related parts and components.

What were the results and lessons learned in developing this improvement?
The sole source procurement is ongoing. Expected end result is reduced lead time for the contractor to deliver the final product.

What other information would help another program evaluate its applicability towards their program?
N/A

TEAMING – SYSTEM SPECIFICATION DEVELOPMENT

Teaming – System Specification Development

NAVAIR 703/604–4200x7528 – phone
Clessas, George 703/604–4234 – fax
JSOW Unitary Variant, AGM–154C clessasgm.ntrprs@navair.navy.mil
PMA–201
PEO(T)/PMA–201
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
Joint Stand-Off Weapon (JSOW) Unitary Variant, AGM–154C

What is the name of your new idea, approach, process innovation, or lesson learned?
Methodology for Cooperative Contractor and Government System Specification Development

Give a description of this idea and how it fits in the program:

The System/Segment Specification is the first level of requirements flowdown below the high level performance document or the statement of objectives. The recommended acquisition reform idea is to empower a cooperative Contractor and Government Team for development of the System/Segment Specification. This approach ensures program wide buy-in, takes advantage of Government experience in writing system specifications and allows the Contractor time and flexibility to perform system level trade-offs treating cost as an independent variable.

The cooperative System Specification development approach is compatible with the use of high level performance document or the statement of objectives which is often recommended under acquisition reform. In addition to a high level System Performance Document (SPD), the JSOW Unitary program developed a set of mission scenarios. These scenarios were developed by the end users and defined how the operational community would employ the weapon system. The mission scenarios were given to the contractor for guidance and provided a context for system level performance tradeoffs which were performed on a high fidelity weapon system simulation.

How is it innovative and creative?

Prior to acquisition reform, the Government wrote the System/Segment Specification and the Contractor was responsible for "Meeting the Specification." One proposed acquisition reform approach is that the Government writes a high level performance document or the statement of objectives and the Contractor writes a System/Segment Specification as part of the contract proposal. The Contractor developed System Specification then becomes part of the contract.

The JSOW Unitary recommended approach is that the Government prepares a high level performance document or the statement of objectives, and a cooperative Contractor and Government team writes the System/Segment Specification. This approach defers completion of the system specification until preliminary requirements allocation, design and cost tradeoffs are performed.

The acquisition reform approach, which requires the System Specification at contract award, does not allow the time for serious requirements development. Developing good system requirements is a difficult and time consuming task. A good requirement is one that is clear, verifiable, performance based, and traceable to a higher level need. The Government has extensive System Specification writing experience since traditionally it was their role. Prime Contractors have extensive design and development experience. Together the Contractor and Government make a highly complimentary team which is capable of developing excellent System Specifications.

How has this new improvement been applied?

The JSOW Unitary System Specification was developed using a cooperative, Contractor and Government System Engineering Requirements Team (SERT). Prior to final acceptance, the specification underwent NAVAIR "gray beard" review consisting of senior weapons acquisition professionals. Only minor changes were recommended, and there was general consensus that the document was an “Excellent” System Specification. Even though the Contractor led the specification development, over half of the content of the specification was written by Government personnel. All SERT members participated in ensuring that the stated requirements were clear, verifiable, performance based, and traceable to higher level needs. The final JSOW Unitary System Specification was submitted 14 months after contract award. The Specification was approved in less than one week after submittal.

What were the results and lessons learned in developing this improvement?

During the System Specification development, numerous cost and performance tradeoffs as well as verification alternatives were considered.

One tradeoff involved replacement of a de-roll prism with electronic de-roll. The tradeoff involved a 2% reduction in overall effectiveness for a $10K recurring cost reduction per weapon ($78M in procurement). The cooperative System Specification development approach both identified and supported the acceptance of this tradeoff.

Every effort was made to identify and purge unrealistic extreme specification corner conditions. The use of realistic scenarios and actually measured environmental data was used. The definition of long term storage conditions is an example. Extensive Government measured storage data was collected and used to define temperature as a function of duration instead of using the traditional extreme temperature values. This investigation of the requirement will allow the use of commercial parts to reduce production costs.

For final effectiveness verification, a core set of mission scenarios were identified. These scenarios became part of the System Specification and will be verified using a high fidelity simulation. System performance verification through simulation greatly reduces the number of expensive weapon free flights. The System Specification was structured to support verification through simulation.

Cooperative Contractor and Government development of the System Specification can be extremely successful resulting in overall reduced program costs.

What other information would help another program evaluate its applicability towards their program?

A high level of trust and teaming between the Contractor and the Government is required for a cooperative System Specification development. Many good system engineers have strong personalities, and every engineer has an opinion as how to write system level requirements. Only when there is trust among the parties and the believe that all members are working in good faith will the significant merits of each alternative be investigated.

There are several factors which helped make the cooperative specification approach successful. The JSOW program has a long history of teaming with Texas Instruments (TI). Integrated Contractor and Government product teams were established in June 1992 after TI won the competitive procurement for development of JSOW. The JSOW Unitary procurement (awarded in August 1995) was sole source and included an Award Fee. System Specification development was an Award Fee item to encourage a cooperative Contractor.

TEAMING – TESTING

Teaming – Testing

NAVAIR 703/604–2446 – phone
Stelloh-Garner, C.703/604–2886 – fax
F/A–18E/F, PMA265 stellohgarce.ntrprs@navair.navy.mil
DPEO(T)ACQP
PEO(T)
1421 Jefferson Davis Hwy.
Arlington, VA 22243–5210

What program are you with?
F/A–18E/F

What is the name of your new idea, approach, process innovation, or lesson learned?
F/A–18E/F Integrated Test Team (ITT)

Give a description of this idea and how it fits in the program:
The ITT is a departure from the traditional test team assembled to support an EMD effort. From its inception, this team has fully integrated government and industry developmental and operational test communities to make the best, most efficient use of time and assets in performing the most comprehensive testing possible.

How is it innovative and creative?
Traditionally, three teams (industry, government DT, and government OT) operated serially, with considerable duplication of effort to validate performance data reported by the 'other' teams. The ITT concept permitted integrated planning, reducing overall requirements and duplication of effort. Joint execution of the plan permitted data sharing, while further reducing the need for duplicitous testing, dramatically reducing cost, schedule and assets required.

How has this new improvement been applied?
The ITT was established in August 95, and will remain in tact through the remainder of the EMD program. The ITT operates within the guidelines agreed to by all the involved parties. Contractor participation, rights, and responsibilities were negotiated by all participants and stipulated in a PCO letter.

What were the results and lessons learned in developing this improvement?
By integrating this team, we were able to work through the normal "organizational walls" and capitalize on the capabilities of our people and assets available to provide an improved product to the warfighter, at reduced cost and schedule.

What other information would help another program evaluate its applicability towards their program?
Phase of program and magnitude of test work to be completed within given/compressed time frame and budgetary constraints.

TELECOMMUNICATIONS INVENTORY MANAGEMENT

Telecommunications Inventory Management

SPAWAR 703/602–4045 – phone
Lai, CDR Janice 703/602–7252 – fax
BLII laij@smtp–gw.spawar.navy.mil
SPAWAR PMW 152
2451 Crystal Drive, Room 706
Arlington, VA 22245–5200

What program are you with?
BLII

What is the name of your new idea, approach, process innovation, or lesson learned?
N/A

Give a description of this idea and how it fits in the program:
We need to include in new IT acquisitions the requirement for vendors to keep track of what's sold/maintained and to whom, i.e. what's on NAS Anywhere. This will help bring us into compliance with DODD 4640.13 which states we should have a total inventory of telecommunications assets on a base. The DODIG is trying to enforce this and has held up at least one contract (CATSII San Diego). These vendor data bases become the property of the government. We are finding that AT&T was not required to keep records for the government on the DCTN contract so it's hazy as to what's out there and the new winning vendor MCI, is having a hard time putting a cutover plan together because the government can not supply the required data.

How is it innovative and creative?
More common sense. The ability to document infrastructure so as we modernize our bases, we know what is the baseline.

How has this new improvement been applied?
Hopefully, it is a hard lesson personnel putting future contracts together will apply.

What were the results and lessons learned in developing this improvement?
N/A

What other information would help another program evaluate its applicability towards their program?
The reality that the work done upfront in the acquisition process can pay great dividends or haunt the government.

TEST AND EVALUATION

Test and Evaluation

MARCOR 703/784–2006x2741 – phone
Hanscom, MAJ Steve 703/784–5842 – fax
Lightweight 155MM Towed Howitzer HANSCOMS1@MQG–SMTP3.USMC.MIL
(LW155)
2033 Barnett Ave, Room 315
Quantico, VA 22134

What program are you with?
LW155 HOWITZER

What is the name of your new idea, approach, process innovation, or lesson learned?
Combine DT and OT whenever feasible, and introduce OT into the acquisition process at the earliest point.

Give a description of this idea and how it fits in the program:
In addition to testing to the requirements, testing plans should also be developed considering the possibility of combining DT and OT events whenever feasible.

How is it innovative and creative?
In the past DT and OT have usually been distinct and separate events. Combining DT and OT tests saves time and money.

How has this new improvement been applied?
Applied during the LW155 shoot-off. We received DT and OT test reports within days of each other which substantially saved time during the source selection process.

What were the results and lessons learned in developing this improvement?
Results: Greatly shortened test and test reporting cycle

Lessons Learned: Timely funding is critical. Congressional plus ups for these events held indiscriminately by OSD limits/hinders the process.

Test coordination and planning has to be substantially expanded. Testing IPTs must be empowered.

What other information would help another program evaluate its applicability towards their program?
The degree, length, and expense of DT/OT are key determinants.

Test and Evaluation

NAVAIR 703/604–3355x8148 – phone
Bushway, Richard703/604–3770 – fax
Aircraft Launch and Recovery Equipment Program Office
PMA 251C BUSHWAYRR.NTRPRS@NAVAIR.NAVY.MIL
NAVAIRSYSCOM
1425 Jefferson Davis Highway
Arlington, VA 22243

What program are you with?
Aircraft Launch and Recovery Equipment Program Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Utilization of Navy operational and training commands in the conduct of TECHEVAL.

Give a description of this idea and how it fits in the program:
Operational and training commands represent an under utilized asset in the acquisition process. Using operational and training command assets provides early and intensive entry level and journeyman user involvement. Training facilities are uniquely designed to simulate operational environments under controlled conditions.

How is it innovative and creative?
TECHEVAL is normally conducted by contractor and government personnel in controlled environments at dedicated test and evaluation facilities.

How has this new improvement been applied?
The A/S32 P–25 Program is an ACAT IVM program to develop a replacement fire fighting vehicle for use on CV/CVN/LHA/LHD flight decks. Reliability Qualification Testing was conducted by the NUWC New London Fire Department on a course set up along the waterfront. Fire testing was conducted (by a former AIR BOSN from USS George Washington) at NATTC Millington using instructors and students to man the vehicle and develop tactics. Fleet Crash and Salvage Crews evaluated the vehicle during shore based fire training in Norfolk and aboard a CVN and LHA during pre-deployment workups in support of air operations.

What were the results and lessons learned in developing this improvement?
Early operator involvement in a realistic environment is required to determine suitability of a design.

Training Command facilities are often unduplicated in the commercial sector. Utilization of these assets provides enhanced realism, often at significantly reduced costs and increased schedule flexibility.

Training Command personnel embody unique knowledge and experiences, and are looking for the opportunity to contribute to your program.

The fleet needs rugged, reliable, basic equipment that does the job. Early user involvement eliminates “nice to have” features and results in a product that is simpler, more reliable, and significantly less expensive to procure and support.

What other information would help another program evaluate its applicability towards their program?

Test and Evaluation

SPAWAR 703/602–8426 – phone
Bryant, LCDR Kathleen 703/602–7252 – fax
NAVMCS II bryant@smtp–gw.spawar.navy.mil
PMW–152
2451 Crystal Drive
Arlington, VA 22245–5200

What program are you with?
NAVMCS II

What is the name of your new idea, approach, process innovation, or lesson learned?
N/A

Give a description of this idea and how it fits in the program:
As an alternative to FOT&E, try utilizing a little known OPTEVFOR–approved test called a Verification of Correction of Deficiencies (VCD). Atypical FOT&E duplicates much of the testing performed in IOT&E. The VCD focuses solely on whether the deficiencies noted in the initial IOT&E have been corrected, which minimizes scope, costs, fleet resources, and time required to achieve full system certification.

How is it innovative and creative?
The ability not to replicate testing.

How has this new improvement been applied?
Yes, Several programs successfully.

What were the results and lessons learned in developing this improvement?
See above.

What other information would help another program evaluate its applicability towards their program?
Check to see if this scenario could be implemented within your program.

Test and Evaluation

NAVAIR 703/604–1002x3940 – phone
Burgess, Harry 703/604–1278 – fax
Tomahawk Command and Control Program burgess@lan–email.peocu.navy.mil
PMA–281–3
Command and Control Systems Program (PMA–281)
PEO, Cruise Missiles and Joint Unmanned Aerial Vehicles, (PEO(CU))
1213 Jefferson Davis Highway
Arlington, VA 22246

What program are you with?
Tomahawk Command and Control Program. – TMPC

What is the name of your new idea, approach, process innovation, or lesson learned?
Modified Acceptance Testing

Give a description of this idea and how it fits in the program:
The Tomahawk Theater Mission Planning Center (TMPC) consists of three major subsystems, each produced by a different developer. In the past Acceptance Tests have been held at each developer's site for its subsystem only. Due to equipment costs, it was not considered feasible to establish a test site at the developers' locations that had all subsystems. After subsystem testing, the separate subsystems were then delivered to a Government site, integrated, then tested as a complete TMPC by the Government's Independent Verification and Validation (IV&V) agent. Because the subsystems had not been tested as an integrated system, new errors were usually found during interface testing.
Two changes have been made to the acceptance testing process:

(1) Encrypted data links connecting the developer's sites allow interface testing during Acceptance Testing.

(2) FAT has been modified so that it is performed by the Government's IV&V agent using a Government Acceptance Test Plan instead of using developer generated test plans.

How is it innovative and creative?

With new communications systems, it is no longer necessary to have subsystems in the same room in order to perform interface testing. Encrypted data links are being established connecting the three contractors. Encryption is required due to the classification level of the data passed between these systems. These encrypted links can be used to create a LAN connecting the subsystems as if they were in the same room. Interface testing can now be performed as part of FAT, with errors found during this testing corrected before acceptance and delivery to the Government.

Acceptance testing based on plans generated by the Government's IV&V agent are more likely to detect errors than testing based on the developer's test plans. The developer should have had a dry run of its own test plans prior to acceptance testing to ensure no errors will be found. An independently developed test plan is likely to test additional features or use the system in a different way, potentially detecting additional errors which can then be corrected before delivery.

How has this new improvement been applied?

The encrypted data links have not yet been established. They are being included in new contracts currently being negotiated with each developer.

Acceptance testing using this new procedure has not yet occurred, but is being included in new contracts currently being negotiated with each developer.

What were the results and lessons learned in developing this improvement?

N/A

What other information would help another program evaluate its applicability towards their program?

N/A

Test and Evaluation

NAVSEA 703/602–9034 – phone
Hall, LT Greg 703/602–5847 – fax
Naval Special Warfare Hall_Gregory_J@hq.navsea.navy.mil
PMS340
PA–2 Room 2010

What program are you with?

Special Operations Forces Laser Marker (SOFLAM)

What is the name of your new idea, approach, process innovation, or lesson learned?

Contractor Testing

Give a description of this idea and how it fits in the program:

SOFLAM is a man-portable laser marker for use with laser guided munitions. The sponsor is the US Special Operations Command. The program has a long history of technical and programmatic problems. During PR–97, we identified funding necessary to finish the program (no funding was then in place as no one expected the program to continue in phase II so long). Part of the funding we identified was for acceptance testing by our acquisition engineering agent (NSWC Crane). The sponsor cut this funding out of the budget since the contractor was performing testing on each laser before shipment.

How is it innovative and creative?

This idea goes along with acquisition reform in that it reduces redundancy and pushes more responsibility onto the contractor. It would have saved approximately $ 140 K in labor as well as extra shipping costs.

How has this new improvement been applied?
N/A

What were the results and lessons learned in developing this improvement?
In our case, the idea did not work. The contractor was bought out prior to production, and the production line moved from Dallas to Orlando. We did have funding in FY96 to perform acceptance testing at Crane and the results so far show a very poor 66% acceptance rate. Most of the failures were related to boresight error or pulse-to-pulse stability – problems which could cause mission failure, but of which the operator would be unaware (the system would appear to function properly – sophisticated equipment is necessary to identify these problems).

What other information would help another program evaluate its applicability towards their program?

1) Make sure the contractor has a proven track record.
2) Stick to relatively uncomplicated systems in which problems are easily identified by the operator.

Test and Evaluation

NAVSEA 703/602–7812 – phone
Hatcher, Ed 703/418–1163 – fax
LHD Acquisition Office hatcher_ed@hq.navsea.navy.mil
PMS377
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?
Special Operations Forces Laser Marker (SOFLAM)

What is the name of your new idea, approach, process innovation, or lesson learned?
Contractor Testing

Give a description of this idea and how it fits in the program:
SOFLAM is a man-portable laser marker for use with laser guided munitions. The sponsor is the US Special Operations Command. The program has a long history of technical and programmatic problems. During PR–97, we identified funding necessary to finish the program (no funding was then in place as no one expected the program to continue in phase II so long). Part of the funding we identified was for acceptance testing by our acquisition engineering agent (NSWC Crane). The sponsor cut this funding out of the budget since the contractor was performing testing on each laser before shipment.

How is it innovative and creative?
This idea goes along with acquisition reform in that it reduces redundancy and pushes more responsibility onto the contractor. It would have saved approximately $ 140 K in labor as well as extra shipping costs.

How has this new improvement been applied?
N/A

What were the results and lessons learned in developing this improvement?

In our case, the idea did not work. The contractor was bought out prior to production, and the production line moved from Dallas to Orlando. We did have funding in FY96 to perform acceptance testing at Crane and the results so far show a very poor 66% acceptance rate. Most of the failures were related to boresight error or pulse-to-pulse stability – problems which could cause mission failure, but of which the operator would be unaware (the system would appear to function properly – sophisticated equipment is necessary to identify these problems).

What other information would help another program evaluate its applicability towards their program?

1. Make sure the contractor has a proven track record.
2. Stick to relatively uncomplicated systems in which problems are easily identified by the operator.

Test and Evaluation

NAVSEA 703/602–7812 – phone
Hatcher, Ed 703/418–1163 – fax
LHD Acquisition Office hatcher_ed@hq.navsea.navy.mil
PMS377
2531 Jefferson Davis Hwy.
Arlington, VA 22242

What program are you with?

LHD 1 Class Acquisition Office

What is the name of your new idea, approach, process innovation, or lesson learned?

Fleet Ship Operability Testing (SOT) compatibility during new construction

Give a description of this idea and how it fits in the program:

We have attempted to narrow delta between the Fleet's criteria for evaluating cargo weapon elevators and the new construction specifications.

How is it innovative and creative?

The ship is designed and tested in accordance with specifications included in the Contract. The Fleet uses Ship Operability Test (SOT) criteria to evaluate the performance of elevators after delivery. The SOT criteria is based upon experience of failures on previous hulls and do not necessarily match the design test criteria. We have attempted to rectify the differences in testing criteria through a cooperative effort.

How has this new improvement been applied?

We have utilized the Fleet technical experts to apply their SOT level testing criteria during Acceptance Trials and have made them an integral part of the evaluation team. The differences in test criteria are being narrowed by including them in the construction specifications.

What were the results and lessons learned in developing this improvement?

This approach greatly reduces the amount of rework required to fix deficiencies identified by SOT level testing after delivery but before custody transfer to the Fleet. Early identification of problems puts the onus of correction on the shipbuilder.

What other information would help another program evaluate its applicability towards their program?

This approach requires the cooperation of SUPSHIP, the Shipbuilder, and the Program Office.

Test and Evaluation

NAVAIR 703/604–2860x8746 – phone
McKernan, CDR John F. 703/604–2405 – fax
DPM, AN/ALR67E(V)2 mckernanfj.ntrprs@navair.navy.mil
PMA272B3
PEO(T)/PMA272
1421 Jefferson Dais Hwy.
Arlington, VA 22243–5210

What program are you with?
TACAIR EW: AN/ALR–67E(V)2

What is the name of your new idea, approach, process innovation, or lesson learned?
Maintain constant communication during Software Qualification Testing (SQT) Process.

Give a description of this idea and how it fits in the program:
Instead of the traditional separate DT and OT phases of testing, we utilized a separate DT but then a combined DT/SQT phase.

How is it innovative and creative?
We did not invent this process but we were one of the first to utilize it.

How has this new improvement been applied?
Though all of the testing during the DT/SQT phase was done by VX–9, close communication was maintained between NAWCWPNS and VX–9. Thus when questions arose or potential problems surfaced during the testing, they were addressed or solved through the joint effort of the lab and squadron.

What were the results and lessons learned in developing this improvement?
The results were an extremely smooth SQT process with no unknowns or problems on the testers side and no surprises in the final report on the developers side. Additionally we intend to take this a step further in our next software test program by starting the joint effort way back at the beginning of DT. If the OT testers are involved from the beginning it should make the final SQT that much easier.

What other information would help another program evaluate its applicability towards their program?

Test and Evaluation

NAVSEA 703/602–0924x102 – phone
Riley, Michael 703/602–1879 – fax
FACDAR riley_michael@hq.navsea.navy.mil
PMS–MDS
2531 Jefferson Davis Hwy.
Arlington, VA 22242–5160

What program are you with?
Forward Area Combined Degaussing and Acoustic Range (FACDAR) ACAT IVM

What is the name of your new idea, approach, process innovation, or lesson learned?
Testing of NDI systems.

Give a description of this idea and how it fits in the program:
We used a combination of contractor and government equipment and facilities to perform contractually required first article tests on FACDAR.

How is it innovative and creative?
Required trust and teamwork between the contractor and the government. Use of government equipment and facilities for system buy off has been discouraged in the past because of liability concerns.

How has this new improvement been applied?
This was the technique used for FACDAR first article tests.

What were the results and lessons learned in developing this improvement?
First article tests were completed on time. Use of this technique can save the government money by averting contractor acquiring separate test equipment and facilities whose costs are passed on to the government.

What other information would help another program evaluate its applicability towards their program?

Test and Evaluation

NAVSEA 703/602–1888x211 – phone
Smith, Dave 703/602–1608 – fax
SEAWOLF Program PMS–350 Smith_Dave@HQ.NAVSEA.NAVY.MIL
350A6

What program are you with?
TEAM SEAWOLF

What is the name of your new idea, approach, process innovation, or lesson learned?
Consolidated Certification Testing

Give a description of this idea and how it fits in the program:
The SHAPM is required to run a test program to demonstrate that the Ship Requirements and Specification have been met. Traditionally this has been done by bringing an independent organization in to perform testing. This testing has generally been a repeat of the tests perform during the grooming and Shipyard Test Program. The program being attempted in SEAWOLF is to only perform the tests one time with the performers being a combination of all the test organizations. The upside is considerable saving in time and money the downside potential is a incomplete or ineffectual test. We will know this at completion of the program.

How is it innovative and creative?
See above

How has this new improvement been applied?
See above

What were the results and lessons learned in developing this improvement?
See above

What other information would help another program evaluate its applicability towards their program?
Just ask yourself the questions:

1) Do I have the time to run a comprehensive independent test program?

2) Do I have the money to pay for this (this is several million dollars) ?

TEST AND EVALUATION – OPERATIONAL ASSESSMENT

Test and Evaluation – Operational Assessment

MARCOR 205/955–7046; DSN 645–7046 – phone
Hudson, Eugene C. 205/842–0947 – fax
Tactical Unmanned Vehicle Program Hudson_ec@fhssmtp.redstone.army.mil
N/A
Commander
U.S. Army Missile Command
ATTN: AMCPM–UG, Building 3221
Redstone Arsenal, AL 35898

What program are you with?
Unmanned Ground Vehicles/Systems Joint Project Office

What is the name of your new idea, approach, process innovation, or lesson learned?
Tactical Unmanned Vehicle (TUV) User Appraisal

Give a description of this idea and how it fits in the program:
The TUV User Appraisal is an UGV/S JPO initiative to provide the Infantry User an early opportunity to use four TUV prototypes in performing scouting missions. TUV prototypes are small all terrain vehicles capable of performing unmanned reconnaissance, surveillance, and target acquisition operations. Tactical unmanned ground vehicles are revolutionary with no established, proven tactics and procedures. The TUV User Appraisal provides the User that capability early on.

How is it innovative and creative?
User Appraisal prototype units were developed utilizing an earlier Sandia Laboratory vehicle called the Dixie. With support from Sandia, the Army Missile Command Research, Development, and Engineering Center, and local support contractors, a modified small vehicle called Surveillance and Reconnaissance Ground Equipment(SARGE) was produced to support a User Appraisal. The User Appraisal is an integral part of the TUV Government in-house Program Definition and Risk Reduction Phase. In the absence of experience with tactical unmanned ground vehicles, the User Appraisal serves to help firm the users operational requirement and at the same time assess a variety of potential missions for unmanned ground vehicles.

How has this new improvement been applied?
Four SARGE units were turned over to the User at Ft. Benning in January 1997. Training has been completed. The User plans to utilize SARGE units during his next National Training Cycle.

What were the results and lessons learned in developing this improvement?
Maintain realistic expectations. SARGE User Appraisal units are prototypes and therefore are not robust from a reliability, performance, and environmental standpoints. Remain persistent in pursuing success, especially in facing and conquering a variety of obstacles.

What other information would help another program evaluate its applicability towards their program?
Perform thorough evaluation of obstacles hindering program progress and devise innovative means to remove them. The Project Manager, UGV/S JPO, did this evaluation shortly after arriving to the position and introduced a User Appraisal proposal which the User subsequently accepted.

TRAINING

Training

MARCOR 703/696–1163 – phone
Brannam, Jay 703/696–1171 – fax
Ammunition brannamj1@mqg–smtp3.usmc.mil
AM–RDA
3033 Wilson Blvd.
Arlington, VA 22201

What program are you with?
Ammunition

What is the name of your new idea, approach, process innovation, or lesson learned?
APM Handbook

Give a description of this idea and how it fits in the program:
The APM Handbook is a step beyond the traditional desktop procedures. The APM Handbook provides general information to incoming personnel that they do not receive before beginning an acquisition position. It provides detailed information on the processes and requirements involved in the acquisition of ammunition for the Marine Corps.

How is it innovative and creative?
New personnel, especially military members, often arrive without any acquisition training. The APM Handbook provides a starting point to understanding the duties of the position.

How has this new improvement been applied?
APMs constantly use the APM Handbook as a reference. It is provided as a beginning reference to anyone who wants to become more familiar with the office functions.

What were the results and lessons learned in developing this improvement?
The APM Handbook provides a constant educational tool and reference for the APMs. It reduces new personnel dependence on established personnel for the basic concepts and processes of ammunition acquisition.

What other information would help another program evaluate its applicability towards their program?

VIRTUAL PROTOTYPING

Virtual Prototyping

NAVAIR 703/604–0946 – phone
Kramer, David703/604–0816 – fax
Advanced Tactical Weapons Control System Kramer@LAN–EMAIL.PEOCU.NAVY.MIL
PMA–282A
1213 Jefferson Davis Highway
Arlington, VA 22246

What program are you with?
Tomahawk Cruise Missiles

What is the name of your new idea, approach, process innovation, or lesson learned?
Virtual Prototyping Laboratory

Give a description of this idea and how it fits in the program:
Establish links between software developers (contractors and government) to allow distributed development on top of a common core. This allows code development at various remote locations and a continuous avenue for integration avoiding the cost and delay of bringing the knowledgeable resources to a common physical site for testing.

How is it innovative and creative?
With the use of COTS and open networked systems, it is now possible to connect various development sites with dedicated high-speed communication networks and in that way, provide a seamless, integrated system across remote sites. This allows system level integration of various software products at critical points of development enabling the identification of development and integration problems often and early. It also allows a viewport for the fleet to critique progress and evaluate alternative paths.

How has this new improvement been applied?
T1 connectivity to various developers and Navy labs has been established. Work is progressing on developing tactical internet connectivity to USS Coronado. Procuring equipment for virtual laboratory.

What were the results and lessons learned in developing this improvement?
In progress. Lessons learned from success of "tiger team" to solve integration problems very late in acquisition schedule, forcing schedule delays. Tiger team brought developers together to solve interface problems.

What other information would help another program evaluate its applicability towards their program?
Defense Information Infrastructure (DII) Common Operating Environment Compliance to level 8 is very helpful to expedite integration. Diagram follows:

A Government Activity (NISE–East) is building the production system (there is no prime contractor). 187
quisition Approach: Procurement of Military Hardware Under the NDI Acquisition Concept 204
Acquisition Streamlining, Joint Sourcing, Leveraged Savings, Cost as an Independent Variable121
Proposed Contract Summary Document (PCSD) 1
Interim Portable GPS (IPGPS) for Passenger Carrying Aircraft 3
Financial Management Process Improvement 5
Continue with contracting reform toward a more commercial approach and continue to develop alternative conflict resolution in order to streamline processes, save time, money and effort. 6
Combine Dem/Val with EMD to shorten the approval/staffing process and maximize competition between competitors. 7
Reduced documentation 8
R&D contracting with production options 9
Our new approach is called "Magic Lantern (Deployment Contingency)" or "ML(DC)." 10
Technology demonstration of ATFLIR prototypes at onset of E&MD. 11
Use of Award Fee type contracts. 13
Best Value Manufacturing 14
Cost as an Independent Variable (CAIV) 17
Award Fee performance element based upon Cost As an Independent Variable (CAIV) 18
Program Manager's Tradespace 20
Cost as an Independent Variable (CAIV) 23
Cost As An Independent Variable (CAIV) 24
Ensure you validate all CDRLs on your contract especially with regard to medium of distribution and number of copies. 25
The Paper Less Contract Data Requirements List (CDRL) 26
Electronic CDRL Program for the LCAC SLEP Contract Modification 28
Deviation Banking30
Change Control Process using the IPT approach as opposed to the MIL–STD 480 process 31
Co-Location of Program Management Oversight Team 33
Collocation of Production Sonobuoy Team in one location, NSWC, Crane. 34
Co-location of the Program Office with prime contractor where prototype system integration and assembly will occur. 34
"Commercial Based Performance Specification". 37
"Commercial Contract Administration". 39
Commercial procurement and support of V–22 engines 41
Prime contractor involvement in Navy decision meetings. 42
Design, development, and test process initiatives. 43
SERC – Sonobuoy Engineering Review Committee 44
Partnership in Affordable Ship Design Development 45
Design GFI Tagging 46
Contract Management by using the Contractor’s electronic database vise Contract Data Requirements List. 47

GIDEP-World Wide Web 50
Computer Based Training52
SNAP in a Box 54
Lesson Learned: Understanding Configuration Management and Supportability are Key to Successfully Implementing Acquisition Reform. 56
Acquisition Strategy for CV/CVN Battle Group Commanders Complex 57
Lesson Learned: A Sole-Source Contractor has little incentive to reduce its engineering and logistic support costs or provide a better quality product. 58
Use of Full Service Contractor to create LPD 17 Product Model in an Integrated Product Data Environment 60
Initialization of Micro-SNAP at Load COSAL/Shipboard SNAP Initialization at Ship's Delivery. 61
Design Budget for CVN 76 62
Electronic Data 64
Streamlined Contracting for Services 65
Innovative Private Party Venture – Bundling of Variety of Telecommunications Services 67
Alpha contracting and the use of a cost model as the basis of a proposal. 69
Lessons learned from Alpha Contracting 70
Alpha Contracting72
Lessons learned from using Alpha Acquisition under JSOW procurements. 73
"Alpha Contracting". 76
ALPHA Contracting/Communication (ALPHA/COMM) 77
Procurement Team Concept (Alpha Acquisition Process) 78
Use of a Cost/Pricing Integrated Product Team (CIPT) to expedite contract award. 79
Alpha Contracting Process 80
Alpha Contracting Process 81
Lesson learned in contracting with foreign contractor 82
Alpha Contracting for Aircraft Transmission Parts Involving Defense General – Columbus, NAVICP, PMA–226, and the Prime and Major Subvendors. 83
Use of FAR Part 12, Acquisition of Commercial Items 85
Use of multi-year contracting for production of CDF systems. 86
Innovative Private Party Contract Venture – Jewelry 87
Lesson Learned: Price Analysis versus Cost Analysis for Contract definitization 88
Joint Strike Fighter Concept Demonstration Program (CDP) Source Selection 90
Use of oral proposals for hardware acquisition 91
The use of a teaming approach for proposal evaluation. 92
Competitive procurement of common equipment on a cyclic basis (a new contract every three years). 95
1. Use of Bid Samples for technical evaluation. The Bid samples were provided free of charge to the Navy. 2. User involvement in the selection of a system. 97
Work Breakdown Structure based Proposals and Contract Baseline 98
Preparation Of Government/Industry Pre-Solicitation Request For Proposal (RFP). 100
Single Contract Procurement 101
Modified Four Step Source Selection Process. 102

Contracting Office Interface 104
Combat Direction Finding (CDF)105
Use of a Cost/Pricing Integrated Product Team (CIPT) to expedite contract award. 105
"Performance Based Payments on Firm-Fixed-Price Contracts" 106
"Templating" reviews and analysis. 107
Extensive Discussions and Debriefings under a Competitive Source Selection 108
Reducing Life Cycle Support (LCS) Costs by Re-engineering with COTS 110
The LRLS is a laser-based optical landing aid that displays centerline information to Navy/Marine Corps pilots during night aircraft carrier operations. The process innovation is the use of Commercial Off the Shelf (COTS) equipment to satisfy this requirement rather than developing a MIL–SPEC system. The lesson learned is that through this process innovation, the Navy was able to afford the COTS system where the MIL–SPEC system was significantly beyond the cost goals of the program. 112
Configuration Management 114
This office has used the term "Rapid COTS Insertion" for initiatives underway that leverage significant amounts of COTS technology allowing for rapid integration of additional combat systems capability and maximizing use of NDI from other organizations. 115
TEAM SUBMARINE STRATEGY 2000 Commercial Off-The-Shelf (COTS) Primer117
Lessons Learned: COTS based programs require a new process for managing changes.118
Fan Belt Change-out 119
Implementation of: Open Systems Architecture (OSA) Design Use of Commercial off-the-shelf (COTS) Computer Resources Adaptation of commercial specifications and standards 120
Use of Air Force-developed Government-Off-the-Shelf (GOTS) software and Commercial-Off-the-Shelf (COTS) hardware.122
Aggressive Integration of Common Components126
Limited Rate Deployment (LRD)127
Streamline procurement of Commercial Off the Shelf (COTS) material for use on Government contracts. 128
Non DoD Industrial Base Technology Insertion.129
Use of COTS in our avionics redesign effort. 130
Benefits of Commercial-Off-The-Shelf (COTS) 130
Acquisition Streamlining, Joint Sourcing, Leveraged Savings, Cost as an Independent Variable 131
Maximize Technology 133
Design-To-Affordability (DTA) 134
CDLMS Program based on COTS/Open Systems Architecture.135
Non DoD Industrial Base Technology Insertion.136
Use of an evolutionary acquisition strategy relying on the use of commercial and government off-the-shelf (COTS/GOTS), non-developmental item (NDI) hardware and software. 137
BFTT Spares Project 139
Pioneer New Sensor Payload Procurement 140
Milestone Decision Authority (MDA) Delegation 142
Proposal for innovative CH–53E commercial SDLM procurement 143
Ways to reduce Life Cycle Costs 146

Navy tactical computers and displays division 148
Technical Performance Management (TPM) 149
Truly Integrated Baseline Review (TIBR) 150
Instituting environmental commitment and awareness early in a program and maintaining a constant focus on it throughout program execution. 152
One-for-one trade-in of used assets to offset the overall cost of replacement aircraft. 154
Acquisition via GSA Schedule 155
Lesson learned: Reconcile the books monthly 157
Lesson learned: Ensure total coverage 158
Lesson learned: Don't do multiple or second sources 159
Use of Indefinite Quantity Contract (IQC). 160
IPT working with NCTS Pensacola to develop F404 (engine) Home Page on internet, with engine description, IPT organization/activities/recalls, Maintenance Forum, ECP tracking system, Inventory database access, and more. 162
An approach to successful Integrated Product and Process Development (IPPD) 164
Associate Contractor Agreements 174
Submarine Link–16 Integrated Product Team 176
"Integrated Product Team Costing". 177
Benefits of Teaming 178
Core Integrated Program Team H–1 Upgrade Management 180
Teaming to facilitate modification and improvements to attack submarines during construction and PSA 181
Acquisition Streamlining and the Pollution Prevention Program 182
Transmission End Caps Ad Hoc Team 184
Team XXI Development Process185
Distributed Program Management 187
Functional IPT 188
AIM–9X Integrated Product Team 189
Highly-integrated IPTs and regular government/contractor management meetings 190
"Teaming Contract Actions" 192
Vehicle Standardized Teleoperation System(VSTS) 193
Know all your customers.195
CAD/PAD increased response to Fleet via new processes. 196
Logistic Engineering Change Proposal (LECP) Success Story: Replacement Inertial Navagaton Unit (RINU) for the P–3C Aircraft 198
Outsourcing Life Cycle Support (LCS) 200
Vanishing Vendor/Parts Inventory Checks 201
Afloat Telecommunications Service Commercial Contract 202
Use of Full Service Contractor to create Total Ownership Cost (TOC) Prediction Model 203
A Government Activity (NISE–East) is building the production system (there is no prime contractor). 204
Providing logistics supportability to TOMAHAWK Land Attack Missile (TLAM) afloat and ashore mission planning centers through privatization. 206

JSOW Unitary Management Information System (MIS) and Technical Data Library (TDL) 210
Use of an Electronic Technical Information Center 212
Program Management Plan Automation 215
Integrated Data Environment (IDE)/Contractor Integrated Technical Information System (CITIS) Integrated Product Team (IPT) 216
Electronic Data Delivery and Storage 217
Rate Insensitive Manufacturing 219
Joint Program/Project Development 220
Teamwork with foreign partners. 221
HARM BLOCK VI Multinational Development Program 222
Acquisition Approach: Procurement of Military Hardware Under the NDI Acquisition Concept 223
"Operational Assessment Process" 225
HARM Training and TACMAN CD ROM 227
Application of the existing Gold Disk program to equipment in shipboard engineering spaces onboard AOE 6 Class ships. 228
TINA Waivers / Parametric Pricing 230
Reduction of specs and standards used in the ERGM acquisition and the MK 45 Gun Mod development program. 232
Performance Based Specification in D&V Contract 233
Review of Specifications 234
Performance Drawings for the Circuit Card level and below. 235
Reduction of specs and standards used in the ERGM acquisition and the MK 45 Gun Mod development program. 237
Specification Conversion from "Build-To-Print" to "Build-To-Specification" for Reprocurements (Process Innovation) 238
Periodic review and update of the TA/AS performance specifications and interface description documents. 243
LHD 1 Class Post Delivery and Fleet Introduction Manual 244
Program Operational Notebook 245
Standardized kernels for system development milestone reviews. 246
Root Cause Analysis / Closed Loop Corrective Action System 248
Contractor Performance Certification Program (CP2) 249
Lesson learned: Define and include all life cycle support for COTS as part of the basic competitive contract. Adding supply support after the contract is established is hard to do. 251
Revisit user requirements prior to finalizing production configuration. 252
Performance Specification flowdown. 253
"Need Based Acquisition" (NBA)254
Strategy to Task to Technology (STT) 255
Use of Common Baseline Across Programs and Agencies 256
Functional Requirements Document Performance-based Specifications 258
Automated Information System Operational Requirements Document (ORD) Processing: Process Innovation: Developed a streamlined approach for developing, reviewing, and approving an ORD for the NSIPS program by effectively using the Integrated Product Team (IPT) concept. 259
Lesson Learned: Government/Contractor Program Risk Assessment Integrated Product Teams. 261
Avoid costly replacement of landing craft by extending the service life of the current platforms. 263
Single Process Initiatives (Block Changes) 264

Single Process Initiative 265
Process innovation for Processing of General Electric Aircraft Engines (GEAE) Single Process Initiatives (SPIs) 266
Process Innovation: NASA utilization of NTCSS, Naval Aviation Logistics Command Management Information System (NALCOMIS) software. Process Innovation: Software ReUse was successfully employed to facilitate a rapid development and deployment of software applications required by NASA Johnson Space Center. 268
GPS Control Display Navigation Unit (CDNU) Software Reuse Initiative 269
Pioneer Digital Mapping System (PDMS) Development 271
Statement of Objectives (SOO) 273
Integrated Communications and Advanced Networks (ICAN) 274
Modular Design to Increase Production Volume 276
Statistical process control (SPC). 277
Air Blown Fiber Optic Cable Plant 278
Special Studies for Ship Detail Design and Construction 279
Use of tailoring in the preparation of acquisition program documentation280
Tailoring the Integrated Program Summary (IPS). 281
Procurement of the EFIS hardware through use of Commercial Off The Shelf (COTS) and installs by teaming of "O" and "D" Levels of Maintenance. 282
JSOW Baseline Program Cost Analysis Improvement Group (CAIG) review for first LRIP DAB decision 284
Streamlined Design Reviews in D&V Contract 286
Formal Teaming Arrangement with Contractor 288
Methodology for Cooperative Contractor and Government System Specification Development 289
F/A–18E/F Integrated Test Team (ITT) 292
Combine DT and OT whenever feasible, and introduce OT into the acquisition process at the earliest point. 295
Utilization of Navy operational and training commands in the conduct of TECHEVAL. 296
Modified Acceptance Testing 298
Contractor Testing299
Contractor Testing300
Fleet Ship Operability Testing (SOT) compatibility during new construction 302
Maintain constant communication during Software Qualification Testing (SQT) Process. 303
Testing of NDI systems. 303
Consolidated Certification Testing304
Tactical Unmanned Vehicle (TUV) User Appraisal 306
APM Handbook 308
Virtual Prototyping Laboratory 309