

DCARC Contractor Sustainment Cost Data Collection

Sandi Enser

Senior Cost Analyst/PMP, Technomics Inc.





Why Sustainment Reporting?

OSD CAPE

- The 2008 update of DODD 5000.02 mandates that reports of sustainment contractors' costs be collected within the CSDR system
- WSARA 2009 – reiterates mandated O&S reporting for MDAPs
- Requirement for annual CAPE report to Congress on O&S costs
- GAO Report GAO-09-41
 - “...detailed support cost data were often not available for DOD weapon systems supported by contractor logistics support and performance-based logistics arrangements”
- GAO Report GAO-10-717
 - “...detailed historical cost data were not available for many weapon systems supported under performance-based logistics arrangements.”
 - “...lacks a standard structure for capturing contractor logistics support costs”
- Language in 2012 Defense Appropriation Bill (Section 803)



DFARS Clause for CSDR Reporting

OSD CAPE

- Effective November 24, 2010
- ANY sustainment contract, regardless of appropriation or contract type, which meets \$50M threshold must report
 - FFP, FPIF, ID/IQ, delivery order, etc
 - Interim Contractor Support (ICS)
 - Contractor Logistics Support (CLS)
 - Performance Based Logistics (PBL)
 - Transactions-based Spares
- Special Interest, Advanced Technology or High Risk threshold of \$20-\$49M can also be used at Program Office's option
- Although DFARS clause does not mention CLS specifically, the requirement applies
- Clauses are found at DFARS 252234.7003 and 252234.7004



Establishing Mandatory Reporting Requirements

OSD CAPE

- Phase 1 (completed in August 2008)
 - Performed by Institute for Defense Analyses for OSD PA&E and OUSD(AT&L)
 - Reviewed DoD policies for weapon system support and identified key issues
 - Researched actual field-level experiences and perspectives
 - Developed a conceptual framework
- Phase 2 and 3 (Fall 2008 to Winter 2010)
 - Technomics performed for OSD CAPE and DCARC
 - Refined and vetted WBS, formats and procedures via Service/Industry workshops and OSD/Service coordination
 - Working groups included CAPE, Service Cost Agencies, Service O&S Leads and Industry
 - Acquired a good understanding of program-specific implementations
 - Addressed the implications of including this data in VAMOSC



Establishing Mandatory Reporting Requirements

OSD CAPE

- Multiple rounds of coordination have been completed
- Phase 4 (Spring 2010 – Feb 2012) DCARC
 - Obtained Service Cost Center Concurrence May 2011
 - Pilot program – form useable but not mandatory
 - Several Program Offices opted to add 1921-4 CDRL
- Phase 5 (March 2012 – now) DCARC
 - Verbal approval from Dr. Burke
 - Form and DID being re-circulated for signature
 - 1921-4 will be mandatory for sustainment contracts that meet reporting threshold
- Possible Future Efforts?
 - 1921-4 – like form for MAIS programs
 - 1921-4 – like form for sustainment performed by Government entities



Why 1921-4?

OSD CAPE

- Existing sustainment 1921s are a variety of WBS structures
 - MIL HDBK 881 based
 - O&S WBS based
 - Combination
- Attempted to add sustainment appendix to MIL-STD 881C, but it was not included in final version.
- CAPE O&S Estimating Guide currently in revision
- 1921-4 is a means of obtaining CLS data in a consistent format.



Revisions to 1921-4 (since last coordination)

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OSD CAPE

SECURITY CLASSIFICATION: <u>Unclassified</u>		CONTRACTOR SUSTAINMENT REPORT				Form Approved OMB No. 0704-0188				
<p>The public reporting burden for this collection of information is estimated to average 16 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.</p>										
1. MAJOR PROGRAM a. NAME: _____ b. PHASE/MILESTONE: <input type="checkbox"/> Pre-A <input type="checkbox"/> B <input type="checkbox"/> C-FRP <input type="checkbox"/> A <input type="checkbox"/> C-LRIP <input type="checkbox"/> O&S		2. PRIME MISSION PRODUCT _____		3. REPORTING ORGANIZATION TYPE <input type="checkbox"/> PRIME / ASSOCIATE CONTRACTOR <input type="checkbox"/> DIRECT-REPORTING SUBCONTRACTOR <input type="checkbox"/> GOVERNMENT		4. NAME/ADDRESS (Include Zip Code) a. PERFORMING ORGANIZATION: _____ b. DIVISION: _____		5. APPROVED PLAN NUMBER _____		
6. CUSTOMER (Direct-Reporting Subcontractor Use Only) _____				7. TYPE ACTION a. CONTRACT NO.: _____ b. LATEST MODIFICATION: _____ c. SOLICITATION NO.: _____ d. NAME: _____ e. TASK ORDER/DELIVERY ORDER/LOT NO.: _____						
8. PERIOD OF PERFORMANCE a. START DATE (YYYYMMDD): _____ b. END DATE (YYYYMMDD): _____		9. REPORT CYCLE <input type="checkbox"/> INITIAL <input type="checkbox"/> INTERIM <input type="checkbox"/> FINAL		10. SUBMISSION NUMBER _____		11. RESUBMISSION NUMBER _____		12. REPORT AS OF (YYYYMMDD) _____		
13. NAME (Last, First, Middle Initial) _____		14. DEPARTMENT _____		15. TELEPHONE NO. (Include Area Code) _____		16. EMAIL ADDRESS _____		17. DATE PREPARED (YYYYMMDD) _____		
18. WBS ELEMENT CODE _____		19. WBS REPORTING ELEMENT _____		20. QUANTITY OR TECHNICAL METRIC <input type="checkbox"/> QUANTITY <input type="checkbox"/> TECHNICAL METRIC (Specify in Remarks) a. TO DATE _____ b. AT COMPLETION _____		21. APPROPRIATION <input type="checkbox"/> RDT&E <input type="checkbox"/> PROCUREMENT <input type="checkbox"/> O&M				
SUSTAINMENT COST ELEMENTS				COST INCURRED TO DATE (thousands of U.S. Dollars)			COST INCURRED AT COMPLETION (thousands of U.S. Dollars)			G. ELEMENT QUANTITY OR TECHNICAL METRIC
				A. NONRECURRING	B. RECURRING	C. TOTAL	D. NONRECURRING	E. RECURRING	F. TOTAL	
(1) 1.0 UNIT LEVEL MANPOWER (SYSTEM LEVEL COST ONLY)										
(2) 1.1 OPERATIONS MANPOWER										
(3) 1.2 UNIT-LEVEL MAINTENANCE MANPOWER										
(4) 1.3 OTHER UNIT-LEVEL MANPOWER (Specify in Remarks)										
(5) 2.0 UNIT OPERATIONS (SYSTEM LEVEL COST ONLY)										
(6) 2.1 OPERATING MATERIAL										
(7) 2.1.1 ENERGY (Fuel, Petroleum, Oil and Lubricants (POL), Electricity)										
(8) 2.1.2 TRAINING MUNITIONS/EXPENDABLE STORES										
(9) 2.1.3 OTHER OPERATING MATERIAL (Specify in Remarks)										
(10) 2.2 SUPPORT SERVICES (INCLUDING NON-MAINTENANCE FSRs)										
(11) 2.3 TEMPORARY DUTY										
(12) 3.0 MAINTENANCE										
(13) 3.1 OVERHAUL OF END ITEMS										
(14) 3.1.1 SCHEDULED OVERHAUL										
(15) 3.1.1.1 VEHICLE OVERHAUL										
(16) 3.1.1.2 PROPULSION OVERHAUL										
(17) 3.1.1.3 OTHER OVERHAUL										
(18) 3.1.2 UNSCHEDULED OVERHAUL										
(19) 3.1.2.1 VEHICLE OVERHAUL										
(20) 3.1.2.2 PROPULSION OVERHAUL										
(21) 3.1.2.3 OTHER OVERHAUL										
(22) 3.2 DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)										
(23) 3.3 CONSUMABLES AND REPAIR PARTS										
(24) 3.4 OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)										
(25) 3.4.1 O-LEVEL MAINTENANCE SERVICES										
(26) 3.4.2 I-LEVEL MAINTENANCE SERVICES										
(27) 3.4.3 DEPOT LEVEL MAINTENANCE SERVICES										

UNCLASSIFIED

Platform/vehicle



Revisions to 1921-4

OSD CAPE

(28)	3.5 PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)				
(29)	4.0 SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)				
(30)	4.1 SYSTEM SPECIFIC TRAINING				
(31)	4.1.1 OPERATOR TRAINING				
(32)	4.1.2 MAINTENANCE TRAINING				
(33)	4.1.3 OTHER TRAINING (Specify in Remarks)				
(34)	4.2 SUPPORT EQUIPMENT REPLACEMENT				
(35)	4.3 SUSTAINING/SYSTEMS ENGINEERING				
(36)	4.3.1 R&M ENGINEERING				
(37)	4.3.2 LOGISTICS ENGINEERING (LSA updates, logistics analysis)				
(38)	4.3.3 SUPPLY ANALYSIS EFFORTS				
(39)	4.3.4 SAFETY/HUMAN SYSTEMS INTEGRATION ENGINEERING				
(40)	4.3.5 AFFORDABILITY ENGINEERING				
(41)	4.3.6 OBSOLESCENCE ENGINEERING				
(42)	4.3.7 AVAILABILITY MANAGEMENT				
(43)	4.3.8 PRODUCT ENGINEERING SUPPORT				
(44)	4.3.9 INFORMATION ASSURANCE				
(45)	4.3.10 CONFIGURATION MANAGEMENT				
(46)	4.3.11 SYSTEM PERFORMANCE ANALYSIS				
(47)	4.3.12 SUPPLY				
(48)	4.3.13 DATA ANALYSIS				
(49)	4.3.14 PHYSICAL SECURITY				
(50)	4.4 PROGRAM MANAGEMENT				
(51)	4.4.1 CONTRACTOR LOGISTICS SUPPORT (CLS) MANAGEMENT				
(52)	4.4.2 CLS SUPPLY MANAGEMENT				
(53)	4.4.3 FINANCIAL/SCHEDULE PLANNING AND REPORTING				
(54)	4.4.4 TRANSITION TO LEAD SERVICE				
(55)	4.4.5 QUALITY ASSURANCE (program level)				
(56)	4.4.6 ADMINISTRATIVE SECURITY				
(57)	4.4.7 TRANSITION TO PERFORMANCE BASED LOGISTICS (PBL)				
(58)	4.4.8 RISK MITIGATION				

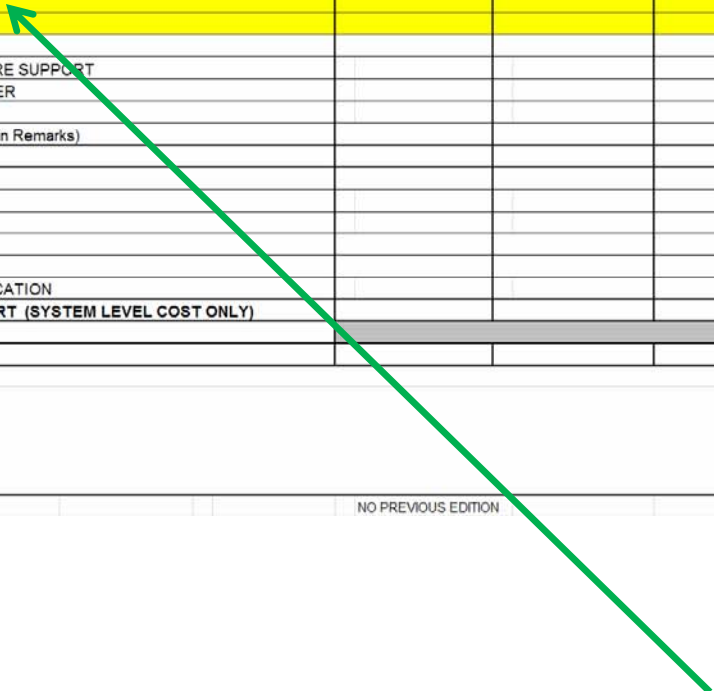
Added Element



Revisions to 1921-4

OSD CAPE

(59)	4.5	INFORMATION SYSTEMS							
(60)	4.5.1	TECH REFRESH							
(61)	4.5.2	LICENSE FEES							
(62)	4.5.3	MAINTENANCE							
(64)	4.6	DATA AND PUBLICATIONS							
(65)	4.7	SIMULATOR OPERATIONS							
(66)	4.7.1	SIMULATOR OPERATIONS HARDWARE SUPPORT							
(67)	4.7.2	SIMULATOR OPERATIONS MANPOWER							
(68)	4.7.3	SIMULATOR TECH REFRESH							
(69)	4.8	OTHER SUSTAINING SUPPORT (Specify in Remarks)							
(70)	5.0	CONTINUING SYSTEM IMPROVEMENTS							
(71)	5.1	MODIFICATIONS OR MODERNIZATION							
(72)	5.1.1	MOD KIT DEVELOPMENT							
(73)	5.1.2	MOD KIT PROCUREMENT							
(74)	5.1.3	MOD KIT INITIAL SPARES							
(75)	5.1.4	MOD KIT INSTALLATION							
(76)	5.2	SOFTWARE MAINTENANCE OR MODIFICATION							
(77)	6.0	INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)							
(78)	SUMMARY								
(79)	TOTAL COST (Direct and Overhead)								
80. Remarks									



Separated into two elements,
added children



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Current 1921-4

OSD CAPE

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(7) 2.1.1 ENERGY (Fuel, Petroleum, Oil, and Lubricants (POL); Electricity)										
(8) 2.1.2 TRAINING MUNITIONS/EXPENDABLE STORES										
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(26) 3.4.2 I-LEVEL MAINTENANCE SERVICES										
(27) 3.4.3 DEPOT LEVEL MAINTENANCE SERVICES										

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1921-4 (continued)

OSD CAPE

(28)	3.5 PACKING, HANDLING, SHIPPING, AND TRANSPORTATION (PHS&T)								
(29)	4.0 SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)								
(30)	4.1 SYSTEM SPECIFIC TRAINING								
(31)	4.1.1 OPERATOR TRAINING								
(32)	4.1.2 MAINTENANCE TRAINING								
(33)	4.1.3 OTHER TRAINING (Specify in Remarks)								
(34)	4.2 SUPPORT EQUIPMENT REPLACEMENT								
(35)	4.3 SUSTAINING/SYSTEMS ENGINEERING								
(36)	4.3.1 RELIABILITY AND MAINTAINABILITY ENGINEERING								
(37)	4.3.2 LOGISTICS ENGINEERING (LSA updates, logistics analysis)								
(38)	4.3.3 SUPPLY ANALYSIS EFFORTS								
(39)	4.3.4 SAFETY/HUMAN SYSTEMS INTEGRATION ENGINEERING								
(40)	4.3.5 AFFORDABILITY ENGINEERING								
(41)	4.3.6 OBSOLESCENCE ENGINEERING								
(42)	4.3.7 AVAILABILITY MANAGEMENT								
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(48)	4.3.13 DATA ANALYSIS								
(49)	4.3.14 PHYSICAL SECURITY								
(50)	4.4 PROGRAM MANAGEMENT								
(51)	4.4.1 CONTRACTOR LOGISTICS SUPPORT (CLS) MANAGEMENT								
(52)	4.4.2 CLS SUPPLY MANAGEMENT								
(53)	4.4.3 FINANCIAL/SCHEDULE PLANNING AND REPORTING								
(54)	4.4.4 TRANSITION TO LEAD SERVICE								
(55)	4.4.5 QUALITY ASSURANCE (Program Level)								
(56)	4.4.6 ADMINISTRATIVE SECURITY								
(57)	4.4.7 TRANSITION TO PERFORMANCE BASED LOGISTICS (PBL)								
(58)	4.4.8 RISK MITIGATION								
(59)	4.5 INFORMATION SYSTEMS								
(60)	4.5.1 TECH REFRESH								
(61)	4.5.2 LICENSE FEES								
(62)	4.5.3 MAINTENANCE								
(63)	4.6 DATA AND PUBLICATIONS								
(64)	4.7 SIMULATOR OPERATIONS								
(65)	4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT								
(66)	4.7.2 SIMULATOR OPERATIONS MANPOWER								
(67)	4.7.3 SIMULATOR TECH REFRESH								
(68)	4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)								
(69)	5.0 CONTINUING SYSTEM IMPROVEMENTS								
(70)	5.1 HARDWARE MODIFICATIONS OR MODERNIZATION								
(71)	5.1.1 MOD KIT DEVELOPMENT								
(72)	5.1.2 MOD KIT PROCUREMENT								
(73)	5.1.3 MOD KIT INITIAL SPARES								
(74)	5.1.4 MOD KIT INSTALLATION								
(75)	5.2 SOFTWARE MAINTENANCE OR MODIFICATION								
(76)	6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)								
(77)	SUMMARY								
(78)	TOTAL COST (Direct and Overhead)								
79.	Remarks								



Mapping Phase 1

OSD CAPE

- Tasking from Dr. Burke
- For each of programs that are currently reporting sustainment costs, map 1921 to 1921-4.
- Typically many 1921 elements map to a single 1921-4 element (for example, Depot Level Repairables)
- Identify elements which are not captured in the 1921-4.

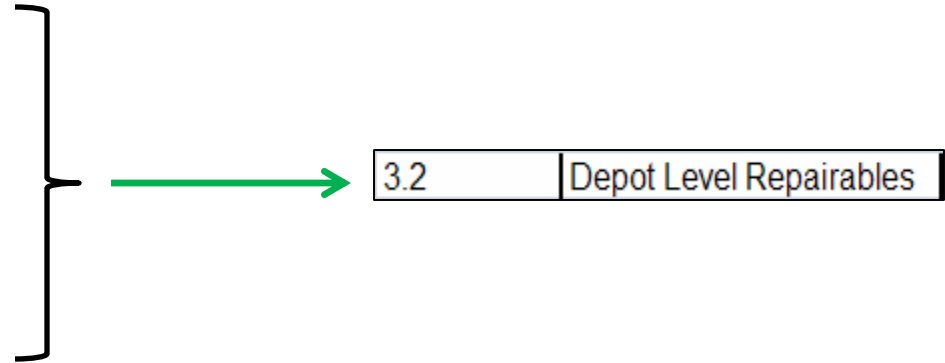


Mapping 1 Example

OSD CAPE

1921 to 1921-4 Mapping (Many to One)

1.7.3.1	Support Spares - Repairable Items
1.7.3.1.1	Air Vehicle
1.7.3.1.1.1	Airframe
1.7.3.1.1.1.1	Forward Fuselage
1.7.3.1.1.1.2	Center Fuselage
1.7.3.1.1.1.3	Wing
1.7.3.1.1.1.4	Aft Fuselage
1.7.3.1.1.1.5	Empennage
1.7.3.1.1.1.6	Control Surfaces and Edges



1921 to 1921-4 Mapping (One to One)

1.7.2.2.1	Pilot Training
1.7.2.2.2	Maintainer Training
1.7.2.2.3	Other Training



4.1.1	Operator Training
4.1.2	Maintenance Training
4.1.3	Other Training

Few Instances of One to Many



Mapping Phase 1 Summary

OSD CAPE

- Existing sustainment 1921s are a variety of WBS structures
 - MIL HDBK 881 based
 - O&S WBS based
 - Combination
- None map perfectly to 1921-4, although O&S and Flying Hour based programs map more easily
- Major components (engines, for example) are of significant interest, and are typically large enough \$ to have their own CSDR report.



Mapping Phase 2

- Map in the “opposite” direction, i.e. put 1921 elements as children under 1921-4 elements
- This effort completed, but did not reveal any additional changes needed
- AFCAA (Dr. Rosa) confirms need for Weapon Systems Information Systems to be broken out separately
- cPet software will include 1921-4 module to streamline plan development



Adding Additional Detail to 1921-4

- MIL-STD 881C as structure to add additional detail
- Would simplify mapping from 1921, which is based on MIL-STD 881 C
- Software should be included in 1921-4 Element 4.6.4

NOTE: Items from MIL-STD 881C in yellow in these slides have retained their original index numbers to show their origin
In the 1921-4 plan, inserted child elements would align with 1921-4 numbering



Adding Additional Detail to 1921-4 Aircraft Example – Appendix A

(12) 3.0 MAINTENANCE		
(13) 3.1 OVERHAUL OF END ITEMS		
(14) 3.1.1 SCHEDULED OVERHAUL		
(15) 3.1.1.1 VEHICLE OVERHAUL		
1.1.1		Airframe
1.1.3		Vehicle Subsystems
1.1.4		Avionics
1.1.5		Armament/Weapons Delivery
1.1.6		Auxiliary Equipment
1.1.7		Furnishings and Equipment
1.1.9		Air Vehicle Integration, Assembly, Test, and Checkout
(16) 3.1.1.2 PROPULSION OVERHAUL		
1.1.2		Propulsion
(17) 3.1.1.3 OTHER OVERHAUL		
(18) 3.1.2 UNSCHEDULED OVERHAUL		
(19) 3.1.2.1 VEHICLE OVERHAUL		
1.1.1		Airframe
1.1.3		Vehicle Subsystems
1.1.4		Avionics
1.1.5		Armament/Weapons Delivery
1.1.6		Auxiliary Equipment
1.1.7		Furnishings and Equipment
1.1.9		Air Vehicle Integration, Assembly, Test, and Checkout
(20) 3.1.2.2 PROPULSION OVERHAUL		
1.1.2		Propulsion
(21) 3.1.2.3 OTHER OVERHAUL		



Adding Additional Detail to 1921-4 Aircraft Example – Appendix A

DSD CAPE

(22)	3.2	DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)
	Various	Rows from 1921
(23)	3.3	CONSUMABLES AND REPAIR PARTS
	1.11	Spares and Repair Parts
(24)	3.4	OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)
(25)	3.4.1	O-LEVEL MAINTENANCE SERVICES
(26)	3.4.2	I-LEVEL MAINTENANCE SERVICES
(27)	3.4.3	DEPOT LEVEL MAINTENANCE SERVICES
(28)	3.5	PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)
(29)	4.0	SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)
(30)	4.1	SYSTEM SPECIFIC TRAINING
	1.5	Training
(31)	4.1.1	OPERATOR TRAINING
(32)	4.1.2	MAINTENANCE TRAINING
(33)	4.1.3	OTHER TRAINING (Specify in Remarks)
(34)	4.2	SUPPORT EQUIPMENT REPLACEMENT
	1.7	Peculiar Support Equipment
	1.8	Common Support Equipment
(35)	4.3	SUSTAINING/SYSTEMS ENGINEERING
	1.2	System Engineering
(50)	4.4	PROGRAM MANAGEMENT
	1.3	Program Management



Adding Additional Detail to 1921-4 Aircraft Example – Appendix A

(59)	4.5 INFORMATION SYSTEMS	
(60)	4.5.1 TECH REFRESH	
(61)	4.5.2 LICENSE FEES	
(62)	4.5.3 MAINTENANCE	
(64)	4.6 DATA AND PUBLICATIONS	
	1.6	Data
(65)	4.7 SIMULATOR OPERATIONS	
(66)	4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT	
(67)	4.7.2 SIMULATOR OPERATIONS MANPOWER	
(68)	4.7.3 SIMULATOR TECH REFRESH	
(69)	4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)	
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(71)	5.1 MODIFICATIONS OR MODERNIZATION	
(72)	5.1.1 MOD KIT DEVELOPMENT	
(73)	5.1.2 MOD KIT PROCUREMENT	
(74)	5.1.3 MOD KIT INITIAL SPARES	
(75)	5.1.4 MOD KIT INSTALLATION	
(76)	5.2 SOFTWARE MAINTENANCE OR MODIFICATION	
	1.1.8	Air Vehicle Software Release 1...n
(77)	6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)	
	1.9	Operational/Site Activation
	1.10	Industrial Facilities
(78)	SUMMARY	
(79)	TOTAL COST (<i>Direct and Overhead</i>)	



Adding Additional Detail to 1921-4 Missile Example – Appendix C

OSD CAPE

(12) 3.0 MAINTENANCE	
(13) 3.1 OVERHAUL OF END ITEMS	
(14) 3.1.1 SCHEDULED OVERHAUL	
(15) 3.1.1.1 VEHICLE OVERHAUL	
1.1.1	Airframe
1.1.3	Power and Distribution
1.1.4	Guidance
1.1.5	Navigation
1.1.6	Controls
1.1.7	Communications
1.1.9	Air Vehicle Integration, Assembly, Test, and Checkout
1.1.8	Payload
1.1.9	Reentry System
1.1.10	Post Boost System
1.1.11	Ordnance Initiation Set
1.1.12	On Board Test Equipment
1.1.13	On Board Training Equipment
1.1.14	Auxiliary Equipment
1.1.16	Air Vehicle Integration, Assembly, Test and Checkout
1.2	Encasement Device
1.3	Command and Launch
(16) 3.1.1.2 PROPULSION OVERHAUL	
1.1.2	Propulsion
(17) 3.1.1.3 OTHER OVERHAUL	



Adding Additional Detail to 1921-4 Missile Example – Appendix C

UNCLASSIFIED

OSD CAPE

(18) 3.1.2 UNSCHEDULED OVERHAUL	
(19) 3.1.2.1 VEHICLE OVERHAUL	
1.1.1	Airframe
1.1.3	Power and Distribution
1.1.4	Guidance
1.1.5	Navigation
1.1.6	Controls
1.1.7	Communications
1.1.9	Air Vehicle Integration, Assembly, Test, and Checkout
1.1.8	Payload
1.1.9	Reentry System
1.1.10	Post Boost System
1.1.11	Ordnance Initiation Set
1.1.12	On Board Test Equipment
1.1.13	On Board Training Equipment
1.1.14	Auxiliary Equipment
1.1.16	Air Vehicle Integration, Assembly, Test and Checkout
1.2	Encasement Device
1.3	Command and Launch
(20) 3.1.2.2 PROPULSION OVERHAUL	
1.1.2	Propulsion
(21) 3.1.2.3 OTHER OVERHAUL	

UNCLASSIFIED



Adding Additional Detail to 1921-4 Missile Example – Appendix C

OSD CAPE

(22)	3.2	DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)
	Various	Rows from 1921
(23)	3.3	CONSUMABLES AND REPAIR PARTS
	1.11	Spares and Repair Parts
(24)	3.4	OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)
(25)	3.4.1	O-LEVEL MAINTENANCE SERVICES
(26)	3.4.2	I-LEVEL MAINTENANCE SERVICES
(27)	3.4.3	DEPOT LEVEL MAINTENANCE SERVICES
(28)	3.5	PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)
(29)	4.0	SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)
(30)	4.1	SYSTEM SPECIFIC TRAINING
	1.9	Training
(31)	4.1.1	OPERATOR TRAINING
(32)	4.1.2	MAINTENANCE TRAINING
(33)	4.1.3	OTHER TRAINING (Specify in Remarks)
(34)	4.2	SUPPORT EQUIPMENT REPLACEMENT
	1.11	Peculiar Support Equipment
	1.12	Common Support Equipment
(35)	4.3	SUSTAINING/SYSTEMS ENGINEERING
	1.6	System Engineering
(50)	4.4	PROGRAM MANAGEMENT
	1.7	Program Management



Adding Additional Detail to 1921-4 Missile Example – Appendix C

OSD CAPE

(59) 4.5 INFORMATION SYSTEMS	
(60) 4.5.1 TECH REFRESH	
(61) 4.5.2 LICENSE FEES	
(62) 4.5.3 MAINTENANCE	
(64) 4.6 DATA AND PUBLICATIONS	
1.10	Data
(65) 4.7 SIMULATOR OPERATIONS	
(66) 4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT	
(67) 4.7.2 SIMULATOR OPERATIONS MANPOWER	
(68) 4.7.3 SIMULATOR TECH REFRESH	
(69) 4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)	
(70) 5.0 CONTINUING SYSTEM IMPROVEMENTS	
(71) 5.1 MODIFICATIONS OR MODERNIZATION	
(72) 5.1.1 MOD KIT DEVELOPMENT	
(73) 5.1.2 MOD KIT PROCUREMENT	
(74) 5.1.3 MOD KIT INITIAL SPARES	
(75) 5.1.4 MOD KIT INSTALLATION	
(76) 5.2 SOFTWARE MAINTENANCE OR MODIFICATION	
1.1.15	Air Vehicle Software Release 1...n
1.4	Missile System Software Release 1...n
(77) 6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)	
1.13	Operational/Site Activation
1.14	Industrial Facilities
(78) SUMMARY	
(79) TOTAL COST (<i>Direct and Overhead</i>)	



Adding Additional Detail to 1921-4 Ships Example – Appendix E

(1) 1.0 UNIT LEVEL MANPOWER (SYSTEM LEVEL COST ONLY)	
(2)	1.1 OPERATIONS MANPOWER
(3)	1.2 UNIT-LEVEL MAINTENANCE MANPOWER
(4)	1.3 OTHER UNIT-LEVEL MANPOWER (Specify in Remarks)
(5) 2.0 UNIT OPERATIONS (SYSTEM LEVEL COST ONLY)	
(6)	2.1 OPERATING MATERIAL
(7)	2.1.1 ENERGY (Fuel, Petroleum, Oil and Lubricants (POL), Electricity)
(8)	2.1.2 TRAINING MUNITIONS/EXPENDABLE STORES
(9)	2.1.3 OTHER OPERATING MATERIAL (Specify in Remarks)
(10)	2.2 SUPPORT SERVICES (INCLUDING NON-MAINTENANCE FSRs)
(11)	2.3 TEMPORARY DUTY
(12) 3.0 MAINTENANCE	
(13)	3.1 OVERHAUL OF END ITEMS
(14)	3.1.1 SCHEDULED OVERHAUL
(15)	3.1.1.1 VEHICLE OVERHAUL
1.1.1	Hull Structure
1.1.3	Electric Plant
1.1.4	Command, Communications and Surveillance
1.1.5	Auxiliary Systems
1.1.6	Outfit and Furnishings
1.1.7	Armament
1.1.8	Total Ship Integration/Engineering
1.1.9	Ship Assembly and Support Services
(16)	3.1.1.2 PROPULSION OVERHAUL
1.1.2	Propulsion Plant
(17)	3.1.1.3 OTHER OVERHAUL

CAPE



Adding Additional Detail to 1921-4 Ships Example – Appendix E

OSD CAPE

(18)	3.1.2	UNSCHEDULED OVERHAUL
(19)	3.1.2.1	VEHICLE OVERHAUL
	1.1.1	Hull Structure
	1.1.3	Electric Plant
	1.1.4	Command, Communications and Surveillance
	1.1.5	Auxiliary Systems
	1.1.6	Outfit and Furnishings
	1.1.7	Armament
	1.1.8	Total Ship Integration/Engineering
	1.1.9	Ship Assembly and Support Services
(20)	3.1.2.2	PROPULSION OVERHAUL
	1.1.2	Propulsion Plant
(21)	3.1.2.3	OTHER OVERHAUL
(22)	3.2	DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)
	Various	Rows from 1921
(23)	3.3	CONSUMABLES AND REPAIR PARTS
	1.11	Spares and Repair Parts
(24)	3.4	OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)
(25)	3.4.1	O-LEVEL MAINTENANCE SERVICES
(26)	3.4.2	I-LEVEL MAINTENANCE SERVICES
(27)	3.4.3	DEPOT LEVEL MAINTENANCE SERVICES
(28)	3.5	PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)



Adding Additional Detail to 1921-4 Ships Example – Appendix E

OSD CAPE

(29) 4.0 SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)	
(30) 4.1 SYSTEM SPECIFIC TRAINING	
1.5	Training
(31) 4.1.1 OPERATOR TRAINING	
(32) 4.1.2 MAINTENANCE TRAINING	
(33) 4.1.3 OTHER TRAINING (Specify in Remarks)	
(34) 4.2 SUPPORT EQUIPMENT REPLACEMENT	
1.7	Peculiar Support Equipment
1.8	Common Support Equipment
(35) 4.3 SUSTAINING/SYSTEMS ENGINEERING	
1.2	System Engineering
(50) 4.4 PROGRAM MANAGEMENT	
1.3	Program Management
(59) 4.5 INFORMATION SYSTEMS	
(60) 4.5.1 TECH REFRESH	
(61) 4.5.2 LICENSE FEES	
(62) 4.5.3 MAINTENANCE	
(64) 4.6 DATA AND PUBLICATIONS	
1.6	Data
(65) 4.7 SIMULATOR OPERATIONS	
(66) 4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT	
(67) 4.7.2 SIMULATOR OPERATIONS MANPOWER	
(68) 4.7.3 SIMULATOR TECH REFRESH	
(69) 4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)	



Adding Additional Detail to 1921-4 Ships Example – Appendix E

OSD CAPE

(70) 5.0 CONTINUING SYSTEM IMPROVEMENTS	
(71) 5.1 MODIFICATIONS OR MODERNIZATION	
(72) 5.1.1 MOD KIT DEVELOPMENT	
(73) 5.1.2 MOD KIT PROCUREMENT	
(74) 5.1.3 MOD KIT INITIAL SPARES	
(75) 5.1.4 MOD KIT INSTALLATION	
(76) 5.2 SOFTWARE MAINTENANCE OR MODIFICATION	
(77) 6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)	
1.9	Operational/Site Activation
1.10	Industrial Facilities
(78) SUMMARY	
(79) TOTAL COST (<i>Direct and Overhead</i>)	



Adding Additional Detail to 1921-4 Surface Vehicle Example – Appendix G

OSD CAPE

(12) 3.0 MAINTENANCE	
(13) 3.1 OVERHAUL OF END ITEMS	
(14) 3.1.1 SCHEDULED OVERHAUL	
(15) 3.1.1.1 VEHICLE OVERHAUL	
1.1	Primary Vehicle
(16) 3.1.1.2 PROPULSION OVERHAUL	
1.1.7	Power Package/Drive Train
(17) 3.1.1.3 OTHER OVERHAUL	
1.2	Remote Control System (UGV specific)
1.3	Secondary Vehicle
(18) 3.1.2 UNSCHEDULED OVERHAUL	
(19) 3.1.2.1 VEHICLE OVERHAUL	
1.1	Primary Vehicle
(20) 3.1.2.2 PROPULSION OVERHAUL	
1.1.7	Power Package/Drive Train
(21) 3.1.2.3 OTHER OVERHAUL	
1.2	Remote Control System (UGV specific)
1.3	Secondary Vehicle
(22) 3.2 DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)	
Various	Elements from 1921



Adding Additional Detail to 1921-4 Surface Vehicle Example – Appendix G

OSD CAPE

(23) 3.3 CONSUMABLES AND REPAIR PARTS	
1.13	Spares and Repair Parts
(24) 3.4 OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)	
(25) 3.4.1 O-LEVEL MAINTENANCE SERVICES	
(26) 3.4.2 I-LEVEL MAINTENANCE SERVICES	
(27) 3.4.3 DEPOT LEVEL MAINTENANCE SERVICES	
(28) 3.5 PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)	
(29) 4.0 SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)	
(30) 4.1 SYSTEM SPECIFIC TRAINING	
1.7	Training
(31) 4.1.1 OPERATOR TRAINING	
(32) 4.1.2 MAINTENANCE TRAINING	
(33) 4.1.3 OTHER TRAINING (Specify in Remarks)	
(34) 4.2 SUPPORT EQUIPMENT REPLACEMENT	
1.9	Peculiar Support Equipment
1.10	Common Support Equipment
(35) 4.3 SUSTAINING/SYSTEMS ENGINEERING	
1.4	System Engineering
1.5	Program Management
1.8	Data



Adding Additional Detail to 1921-4 Surface Vehicle Example – Appendix G

OSD CAPE

(65) 4.7 SIMULATOR OPERATIONS	
(66) 4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT	
(67) 4.7.2 SIMULATOR OPERATIONS MANPOWER	
(68) 4.7.3 SIMULATOR TECH REFRESH	
(69) 4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)	
(70) 5.0 CONTINUING SYSTEM IMPROVEMENTS	
(71) 5.1 MODIFICATIONS OR MODERNIZATION	
(72) 5.1.1 MOD KIT DEVELOPMENT	
(73) 5.1.2 MOD KIT PROCUREMENT	
(74) 5.1.3 MOD KIT INITIAL SPARES	
(75) 5.1.4 MOD KIT INSTALLATION	
(76) 5.2 SOFTWARE MAINTENANCE OR MODIFICATION	
(77) 6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)	
1.11	Operational/Site Activation
1.12	Industrial Facilities
(78) SUMMARY	
(79) TOTAL COST (<i>Direct and Overhead</i>)	



Adding Additional Detail to 1921-4 UAV Example – Appendix H

OSD CAPE

(12) 3.0 MAINTENANCE		
(13) 3.1 OVERHAUL OF END ITEMS		
(14) 3.1.1 SCHEDULED OVERHAUL		
(15) 3.1.1.1 VEHICLE OVERHAUL		
1.1.1		Airframe
1.1.3		Vehicle Subsystems
1.1.4		Avionics
1.1.5		Auxiliary Equipment
1.1.6		Air Vehicle Integration, Assembly, Test, and Checkout
(16) 3.1.1.2 PROPULSION OVERHAUL		
1.1.2		Propulsion
(17) 3.1.1.3 OTHER OVERHAUL		
1.3		Ground/Host Segment
(18) 3.1.2 UNSCHEDULED OVERHAUL		
(19) 3.1.2.1 VEHICLE OVERHAUL		
1.1.1		Airframe
1.1.3		Vehicle Subsystems
1.1.4		Avionics
1.1.5		Auxiliary Equipment
1.1.6		Air Vehicle Integration, Assembly, Test, and Checkout
(20) 3.1.2.2 PROPULSION OVERHAUL		
1.1.2		Propulsion
(21) 3.1.2.3 OTHER OVERHAUL		
1.3		Ground/Host Segment



Adding Additional Detail to 1921-4 UAV Example – Appendix H

OSD CAPE

(22) 3.2 DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)	
Various	Rows from 1921
(23) 3.3 CONSUMABLES AND REPAIR PARTS	
1.15	Spares and Repair Parts
(24) 3.4 OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)	
(25) 3.4.1 O-LEVEL MAINTENANCE SERVICES	
(26) 3.4.2 I-LEVEL MAINTENANCE SERVICES	
(27) 3.4.3 DEPOT LEVEL MAINTENANCE SERVICES	
(28) 3.5 PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)	
(29) 4.0 SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)	
(30) 4.1 SYSTEM SPECIFIC TRAINING	
1.8	Training
(31) 4.1.1 OPERATOR TRAINING	
(32) 4.1.2 MAINTENANCE TRAINING	
(33) 4.1.3 OTHER TRAINING (Specify in Remarks)	
(34) 4.2 SUPPORT EQUIPMENT REPLACEMENT	
1.10	Peculiar Support Equipment
1.11	Common Support Equipment
(35) 4.3 SUSTAINING/SYSTEMS ENGINEERING	
1.6	System Engineering
(50) 4.4 PROGRAM MANAGEMENT	
1.7	Program Management



Adding Additional Detail to 1921-4 UAV Example – Appendix H

OSD CAPE

1.10	Data
(65)	4.7 SIMULATOR OPERATIONS
(66)	4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT
(67)	4.7.2 SIMULATOR OPERATIONS MANPOWER
(68)	4.7.3 SIMULATOR TECH REFRESH
(69)	4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)
(70)	5.0 CONTINUING SYSTEM IMPROVEMENTS
(71)	5.1 MODIFICATIONS OR MODERNIZATION
(72)	5.1.1 MOD KIT DEVELOPMENT
(73)	5.1.2 MOD KIT PROCUREMENT
(74)	5.1.3 MOD KIT INITIAL SPARES
(75)	5.1.4 MOD KIT INSTALLATION
(76)	5.2 SOFTWARE MAINTENANCE OR MODIFICATION
1.4	UAV Software Release 1...n
(77)	6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)
1.13	Operational/Site Activation
1.14	Industrial Facilities
(78)	SUMMARY
(79)	TOTAL COST (<i>Direct and Overhead</i>)



Adding Additional Detail to 1921-4 UMS Example – Appendix I

OSD CAPE

(12) 3.0 MAINTENANCE		
(13) 3.1 OVERHAUL OF END ITEMS		
(14) 3.1.1 SCHEDULED OVERHAUL		
(15) 3.1.1.1 VEHICLE OVERHAUL		
1.1.1		Hull and Structure
1.1.3		Energy Storage / Conversion
1.1.4		Electrical Power
1.1.5		Vehicle Command and Control
1.1.6		Surveillance
1.1.7		Communications/Identification
1.1.8		Ship Control Systems
1.1.9		Auxiliary Systems
1.2		Payload
1.3		Shipboard Segment
(16) 3.1.1.2 PROPULSION OVERHAUL		
1.1.2		Propulsion
(17) 3.1.1.3 OTHER OVERHAUL		
1.4		Shore Segment (Duplicate any shipboard segment elements as appropriate)
1.5		Transportation Segment/Vehicles



Adding Additional Detail to 1921-4 UMS Example – Appendix I

OSD CAPE

(18) 3.1.2 UNSCHEDULED OVERHAUL		
(19) 3.1.2.1 VEHICLE OVERHAUL		
1.1.1		Hull and Structure
1.1.3		Energy Storage / Conversion
1.1.4		Electrical Power
1.1.5		Vehicle Command and Control
1.1.6		Surveillance
1.1.7		Communications/Identification
1.1.8		Ship Control Systems
1.1.9		Auxiliary Systems
1.2		Payload
1.3		Shipboard Segment
(20) 3.1.2.2 PROPULSION OVERHAUL		
1.1.2		Propulsion
(21) 3.1.2.3 OTHER OVERHAUL		
1.4		Shore Segment (Duplicate any shipboard segment elements as appropriate)
1.5		Transportation Segment/Vehicles
(22) 3.2 DEPOT LEVEL REPARABLES (DLR) /REPAIR OF REPARABLES (ROR)		
Various		1921 Elements
(23) 3.3 CONSUMABLES AND REPAIR PARTS		
1.17		Initial Spares and Repair Parts



Adding Additional Detail to 1921-4 UMS Example – Appendix I

UNCLASSIFIED

OSD CAPE

(24)	3.4	OTHER MAINTENANCE SERVICES (INCLUDING FSRs) (Specify in Remarks)
(25)	3.4.1	O-LEVEL MAINTENANCE SERVICES
(26)	3.4.2	I-LEVEL MAINTENANCE SERVICES
(27)	3.4.3	DEPOT LEVEL MAINTENANCE SERVICES
(28)	3.5	PACKING, HANDLING, SHIPPING AND TRANSPORTATION (PHS&T)
(29)	4.0	SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)
(30)	4.1	SYSTEM SPECIFIC TRAINING
	1.11	Training
(31)	4.1.1	OPERATOR TRAINING
(32)	4.1.2	MAINTENANCE TRAINING
(33)	4.1.3	OTHER TRAINING (Specify in Remarks)
(34)	4.2	SUPPORT EQUIPMENT REPLACEMENT
	1.13	Peculiar Support Equipment
	1.14	Common Support Equipment
(35)	4.3	SUSTAINING/SYSTEMS ENGINEERING
	1.8	System Engineering
(50)	4.4	PROGRAM MANAGEMENT
	1.9	Program Management
(64)	4.6	DATA AND PUBLICATIONS
	1.12	Data
(65)	4.7	SIMULATOR OPERATIONS
(66)	4.7.1	SIMULATOR OPERATIONS HARDWARE SUPPORT
(67)	4.7.2	SIMULATOR OPERATIONS MANPOWER
(68)	4.7.3	SIMULATOR TECH REFRESH
(69)	4.8	OTHER SUSTAINING SUPPORT (Specify in Remarks)
(70)	5.0	CONTINUING SYSTEM IMPROVEMENTS
(71)	5.1	MODIFICATIONS OR MODERNIZATION
(72)	5.1.1	MOD KIT DEVELOPMENT
(73)	5.1.2	MOD KIT PROCUREMENT
(74)	5.1.3	MOD KIT INITIAL SPARES
(75)	5.1.4	MOD KIT INSTALLATION
(76)	5.2	SOFTWARE MAINTENANCE OR MODIFICATION
(77)	6.0	INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)
	1.15	Operational/Site Activation
	1.16	Industrial Facilities
(78)	SUMMARY	
(79)	TOTAL COST (Direct and Overhead)	

UNCLASSIFIED



Adding Additional Detail to 1921-4 Information Systems Example – Appendix K

OSD CAPE

(29) 4.0 SUSTAINING SUPPORT (SYSTEM LEVEL COST ONLY)		
(30) 4.1 SYSTEM SPECIFIC TRAINING		
(31) 4.1.1 OPERATOR TRAINING		
	1.6	Training
	1.6.1	Equipment
	1.6.2	Services
	1.6.3	Facilities
(32) 4.1.2 MAINTENANCE TRAINING		
	1.6	Training
	1.6.1	Equipment
	1.6.2	Services
	1.6.3	Facilities
(33) 4.1.3 OTHER TRAINING (Specify in Remarks)		
	1.6	Training
	1.6.1	Equipment
	1.6.2	Services
	1.6.3	Facilities
(34) 4.2 SUPPORT EQUIPMENT REPLACEMENT		
(35) 4.3 SUSTAINING/SYSTEMS ENGINEERING		
	1.2	System Engineering
(36) 4.3.1 RELIABILITY AND MAINTAINABILITY ENGINEERING		
(37) 4.3.2 LOGISTICS ENGINEERING (LSA updates, logistics analysis)		
(38) 4.3.3 SUPPLY ANALYSIS EFFORTS		
(39) 4.3.4 SAFETY/HUMAN SYSTEMS INTEGRATION ENGINEERING		
(40) 4.3.5 AFFORDABILITY ENGINEERING		
(41) 4.3.6 OBSOLESCENCE ENGINEERING		
(42) 4.3.7 AVAILABILITY MANAGEMENT		
(43) 4.3.8 PRODUCT ENGINEERING SUPPORT		
(44) 4.3.9 INFORMATION ASSURANCE		



Adding Additional Detail to 1921-4 Info Systems Example – Appendix K

OSD CAPE

(45)	4.3.10 CONFIGURATION MANAGEMENT	
	1.4	Change Management
(46)	4.3.11 SYSTEM PERFORMANCE ANALYSIS	
(47)	4.3.12 SUPPLY	
(48)	4.3.13 DATA ANALYSIS	
(49)	4.3.14 PHYSICAL SECURITY	
(50)	4.4 PROGRAM MANAGEMENT	
	1.3	Program Management
(51)	4.4.1 CONTRACTOR LOGISTICS SUPPORT (CLS) MANAGEMENT	
(52)	4.4.2 CLS SUPPLY MANAGEMENT	
(53)	4.4.3 FINANCIAL/SCHEDULE PLANNING AND REPORTING	
(54)	4.4.4 TRANSITION TO LEAD SERVICE	
(55)	4.4.5 QUALITY ASSURANCE (Program Level)	
(56)	4.4.6 ADMINISTRATIVE SECURITY	
(57)	4.4.7 TRANSITION TO PERFORMANCE BASED LOGISTICS (PBL)	
(58)	4.4.8 RISK MITIGATION	



Adding Additional Detail to 1921-4 Info Systems – Appendix K

UNCLASSIFIED

OSD CAPE

(59) 4.5 INFORMATION SYSTEMS	
1.1	Automated Information System Prime Mission Product Release/Increment X
1.1.1	Custom Application Software 1...n (Specify)
1.1.1.1	Subsystem Hardware
1.1.1.2	Subsystem Software CSCI 1...n (Specify)
1.1.1.3	Subsystem Software Integration, Assembly, Test and Checkout
1.1.2	Enterprise Service Element 1...n (Specify)
1.1.2.1	Enterprise Service Element Hardware
1.1.2.2	Enterprise Service Element Software CSCI 1...n (Specify)
1.1.2.3	Enterprise Service Element Integration, Assembly, Test and Checkout
1.1.3	Enterprise Information System 1...n (Specify)
1.1.3.1	Business Area Hardware
1.1.3.2	Business Area Software CSCI 1...n (Specify)
1.1.3.3	Business Area Integration, Assembly, Test and Checkout
1.1.4	External System Interface Development 1...n (Specify)
1.1.4.1	External System Interface Hardware
1.1.4.2	External System Interface Software CSCI 1...n (Specify)
1.1.4.3	External System Interface Integration, Assembly, Test and Checkout
1.1.5	AIS Platform Hardware
1.1.6	System Level Integration



Adding Additional Detail to 1921-4 Info Systems – Appendix K

UNCLASSIFIED

OSD CAPE

Add additional PMP Releases/Increments as needed	
(60)	4.5.1 TECH REFRESH
(61)	4.5.2 LICENSE FEES
(62)	4.5.3 MAINTENANCE
	4.5.3.1 Help Desk
	4.5.3.2 System/Database Administration
	4.5.3.3 Accreditation
	4.5.3.4 Information Systems-specific Follow On Training
	4.5.3.5 Independent Verification and Validation
(63)	4.6 DATA AND PUBLICATIONS
	1.7 Data
	1.7.1 Technical Publications
	1.7.2 Engineering Data
	1.7.3 Management Data
	1.7.4 Support Data
	1.7.5 Data Depository
(64)	4.7 SIMULATOR OPERATIONS
(65)	4.7.1 SIMULATOR OPERATIONS HARDWARE SUPPORT
(66)	4.7.2 SIMULATOR OPERATIONS MANPOWER
(67)	4.7.3 SIMULATOR TECH REFRESH
(68)	4.8 OTHER SUSTAINING SUPPORT (Specify in Remarks)



Adding Additional Detail to 1921-4 Info Systems – Appendix K

UNCLASSIFIED

OSD CAPE

(69) 5.0 CONTINUING SYSTEM IMPROVEMENTS		
(70) 5.1 HARDWARE MODIFICATIONS OR MODERNIZATION		
(71)	5.1.1	MOD KIT DEVELOPMENT
(72)	5.1.2	MOD KIT PROCUREMENT
(73)	5.1.3	MOD KIT INITIAL SPARES
(74)	5.1.4	MOD KIT INSTALLATION
(75) 5.2 SOFTWARE MAINTENANCE OR MODIFICATION		
(76) 6.0 INSTALLATION AND PERSONNEL SUPPORT (SYSTEM LEVEL COST ONLY)		
	1.10	Operational/Site Activation
	1.10.1	Site Type 1
	1.10.1.1	Deployment Hardware and Software
	1.10.1.2	User Documentation
	1.10.1.3	Site Activation
	1.10.1.4	User Training
	1.10.1.5	Data Migration
	1.10.1.6	Management/Engineering Support
	1.10.1.7	Interim Logistics Support
Add additional Sites as needed		
	1.11	Industrial Facilities
	1.11.1	Construction/Conversion/Expansion
	1.11.2	Equipment Acquisition or Modernization
	1.11.3	Maintenance (Industrial Facilities)
(77) SUMMARY		
(78) TOTAL COST (<i>Direct and Overhead</i>)		



Conclusions

OSD CAPE

- 1921-4 provides an O&S format for CLS reporting
- Provides shell with flexibility to provide additional detail as needed by Program Offices and Service Cost Agencies
- Using 881C for lower level detail offers familiar structure and helps map 1921 into 1921-4 WBS