Exhibit R-2, RDT&E Budget Item Justification				**Date:** February 2005				
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05				**R-1 ITEM NOMENCLATURE** Defense Message System/PE 0303129K				
COST (in millions)	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Defense Message System/DM01	12.390	5.584	13.367	11.050	7.521	7.524	7.739	8.019

A. Mission Description and Budget Item Justification:

The Defense Message System (DMS) provides secure and accountable messaging services to meet the full range of organizational and individual messaging needs throughout the Department of Defense (DoD). The Office of Assistant Secretary of Defense for Networks, Integration and Information (OASD/NII) directed development of DMS and mandated DoD's transition from legacy systems to DMS. DMS fulfills Joint Staff validated and prioritized operational requirements for an integrated writer-reader capable, organizational messaging system that is accessible worldwide (to include tactically deployed military personnel), and interfaces to Allies. DMS utilizes Commercial-Off-the-Shelf (COTS) and modified COTS components to provide multi-media messaging and directory capabilities that complement and leverage the Global Information Grid (GIG). DMS capability exceeds that of pure COTS applications with reliable handling of information at all classification levels, compartments, and handling instructions, thus meeting DoD's unique messaging requirements and maintaining interoperability with our Allies. DMS incorporates state-of-the-art information technologies, including the internationally developed Allied Communications Protocol (ACP) 120 implementation of the Common Security Protocol (CSP), which provides automated access controls for compartments, code words, and caveats. Public Key Infrastructure (PKI) certificates are used for authentication and access control. DMS utilizes DoD Class 4 PKI products developed by the National Security Agency (NSA) to provide message signature and encryption via approved algorithms and protocols (FORTEZZA). This is referred to as DMS "high grade" service and supports the level of protection required for unclassified and classified military organizational messaging. DMS also allows use of the DoD Common Access Card (CAC), with DoD Class 3 PKI certificates for individual messaging. At this time, the CAC does not provide the requisite level of support to meet operational "high grade" messaging requirements. A key tenet of the DMS acquisition strategy was to leverage commercial products to the maximum extent possible. This strategy necessitates continued software integration and testing of commercial product updates (operating systems and applications) throughout the life cycle to avoid obsolescence and to ensure adequate life cycle support.

DISA is working with the Joint Staff, Services, Agencies, and industry to insure DoD's Command and Control (C2) messaging requirements are met through convergence with emerging commercial capabilities. This Program Element (PE)is under Budget Activity 5 and involves major upgrades that improve system performance and extend useful service life. Some security efforts of the Program are funded in PE 0303140K (not duplication of effort). DMS products formerly

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provided by NSA will be maintained by DISA (beginning in FY 2006) as part of each maintenance release. While these products will become part of DMS releases (including operating system updates) and result in an increase to RDT&E within PE 0303129K, total Program budget has been reduced to sustainment levels based on an anticipated reduction in commercial technology refresh.

Accomplishments/Planned Program:

*DMS Maintenance Release	FY 04	FY 05	FY 06	FY 07
Subtotal Cost	4.097	3.590	8.055	7.120

*Note that FY 2004 and FY 2005 activity is dually funded through PE 0303129K and Information Assurance, PE 0303140K. Starting in FY 2006, the effort is funded from PE 0303129K only, with RDT&E funds increased accordingly to meet program requirements. While total DMS program budget has decreased, realignment of program elements within DISA has increased RDT&E funds in PE 0303129K.

RDT&E funds support software integration and developmental testing activities required to avoid complete divergence of DMS products from current commercial technology and activities required to meet evolving DoD security policies and counter evolving information warfare threats. Products newly implemented by the Services and Agencies must also be tested and integrated into the system to ensure compatibility and interoperability and for configuration management. System improvements, such as patches (for bug fixes), commercial service packs, and mitigation of emerging security vulnerabilities, are integrated and implemented through DMS software releases, which are similar to commercial Service Packs. During FY 2004, DMS RDT&E funds provided for engineering, integration, and testing of major Directory Security Enhancements (DSE) resulting from an OSD mandated system security assessment (conducted by NSA). These enhancements increased the robustness of security for organizational messaging through Top Secret/SCI and are required for implementation of DMS within the Intelligence Community (IC).

In FY 2005, the final phase of DSE will be integrated and tested. Future DMS releases will provide for engineering and

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integration of security, interoperability, and communications support capabilities and functionality unique to DMS operations in the IC and tactical environments. Areas of focus for the IC include DSE and additional legacy translation support. Areas of focus for tactical DMS use include operations in limited bandwidth environments, and support for connectionless mode transport in the messaging application. In addition, DMS security services (FORTEZZA) will be migrated from a client/server topology to a domain or 'boundary server" topology. This represents a significant evolution of the DMS to provide a higher degree of user service while removing the complexities associated with FORTEZZA from the users' workstations. To allow full-scale implementation, existing products will require significant performance and scalability enhancements. Beginning in FY 2006, DMS products formerly provided by NSA will begin to be maintained by DISA (updated and integrated as part of each DMS Release), including operating system updates.

DMS Systems Engineering	FY 04	FY 05	FY 06	FY 07
Subtotal Cost	5.194	0.744	1.382	0.000

RDT&E funds support system engineering activities associated with DMS releases (above), and activities required in support of evolving DoD security policies and to counter evolving information warfare threats. The supported tasks include program and systems management, technical assessments of system performance against operational requirements, and analysis of recommended solutions to any identified deficiencies or security vulnerabilities. During FY 2004, the primary systems engineering focus was translation of top-level requirements for improved system level and directory security into more detailed specifications and product plans. Focus for FY 2005 and FY 2006 will be assessment of and resolution of system scalability issues. As systems engineering functions become more maintenance oriented in the sustainment phase of the DMS life cycle, these functions will be performed with O&M.

*Test Support	FY 04	FY 05	FY 06	FY 07
Subtotal Cost	2.549	1.250	3.930	3.930

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*Note that FY 2004 and FY 2005 activity is dually funded through PE 0303129K and Information Assurance, PE 0303140K. Starting in FY 2006, the effort is funded from PE 0303129K only.

DMS releases undergo developmental, operational, and security testing before widespread fielding. The Joint Interoperability Test Command (JITC) provides DMS test support for all new releases, including correction of problems identified with product functionality or system capability. Information Assurance Vulnerability Alerts (IAVAs) are continuously assessed and often require product changes either within a software release or asynchronously. Requisite product changes are tested and delivered to protect and sustain the fielded system. In FY 2004, directory security enhancements (as mandated by OSD) were developmentally tested with DMS Release 3.0 Maintenance Release 1 (MR1). Testing was focused on resolution of Problem Ticket Reports (PTRs) and continuing integration of DSE. In FY 2005, DMS Release 3.1 (which includes final implementation of DSE) will be operationally tested and further changes identified through NSA assessment and will be implemented after completion of appropriate developmental and operational tests. Scope of testing efforts is constrained by funding cuts to the Program.

Emergency Action Message (EAM) Support	FY 04	FY 05	FY 06	FY 07
Subtotal Cost	0.550	0.000	0.000	0.000

In order to preserve a seamless tactical and strategic DMS implementation, including interoperability with the Nuclear Command and Control Community and Allies, DMS participated in long-term requirements definition, architectural development, analysis of alternatives, and a proof of concept effort. The DMS program tested an interim solution for Nuclear Command and Control messaging. Fielding of DMS in support of non-time-critical Emergency Action Message (EAM) users was completed in March 2004.

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B. Program Change Summary:

	FY 04	FY 05	FY 06	FY 07
Previous President's Budget	9.662	6.623	6.348	6.637
Current Submission	12.390	5.584	13.367	11.050
Total Adjustments	2.728	-1.039	7.019	4.413

Change Summary Explanation:
FY 2004 change is due to below threshold reprogramming.
FY 2005 change is due to undistributed Congressional reductions to the Defense-Wide RDT&E appropriation as well as below threshold reprogramming.
FY 2006 and FY 2007 changes are due to DMS program restructuring to incorporate products formerly provided by NSA and security functions formerly budgeted in PE 0303140K. Note that FY 2004 and FY 2005 activity is dually funded through PE 0303129K and Information Assurance, PE 0303140K. Starting in FY 2006, the work is funded from PE 0303129K only.

C. Other Program Funding Summary:

	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	To Complete	Total Cost
Procurement, DW	9.270	4.182	8.912	6.657	4.788	4.797	5.080	5.420	Contg	Contg
O&M, DW	15.820	28.583	21.645	22.038	17.623	17.761	17.964	18.207	Contg	Contg

D. Acquisition Strategy: The overall strategy is based upon the fundamental premise that Commercial-Off-the-Shelf products will continue their evolution through the constant refresh of commercial technology. To maintain an interoperable system, DMS will continue to use a single contractor as an overall integrator. Contract Administration is under a fee for service arrangement by the DMS Contracting Office, which is based at Maxwell Air Force Base - Gunter

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Annex, Alabama. Additionally, DMS utilizes contract vehicles within DISA to acquire other equipment and services to support the implementation of DMS such as the Next Generation Contract. Contracts have been competitively awarded and provide support in the following areas: program planning and control; analytic services of the DMS system integration; organizational messaging; tactical deployment; operations; configuration management; and training and logistics. These contracts also provide support for fielding of Virtual Private Networking (VPN) technology that will protect the DMS backbone. The DMS employs several strategies for the acquisition of products and services:

1. Ordering of DMS hardware, software, integration, engineering and technical services from the DMS Lockheed Martin contract.

2. Standard commercial products and services required to accomplish DMS implementation are procured via existing GSA Schedule or other high volume/ID-IQ contract vehicles. Specialized security products (such as High Assurance Guard [HAG] and Certificate Authority Workstation [CAW]) are currently provided by NSA and incorporated as Government Furnished Equipment (GFE) by the integrator. In FY 2006 and beyond, these products will be provided by DISA.

3. MITRE as a Federally Funded Research and Development Center (FFRDC) provides systems engineering and integration support for the DMS community, applying engineering discipline and principles to DMS in functional areas of system architecture, technical strategy, program strategy, and program execution.

E. Performance Metrics:

Key Performance Parameters (KPPs) were established to ensure DMS system performance meets or exceeds critical operational requirements contained in the validated Joint Staff requirements document. For each KPP, an objective and threshold value has been established, and measures are monitored each month. There are 24 KPPs for DMS, as defined in the DMS Acquisition Program Baseline. A subset of these KPP's is described below.

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KPP Name	**Objective**	**Threshold**	**Status**
Backbone System Availability	≥ 99% availability of Regional Node	99.67%	Green
Local Site Availability	≥ 99% availability of Commissioned Sites	99.4%	Green
Directory Search, Level 5-8	≤ 5 sec for DMS user over Network LAN	0.82 sec	Green
Directory Browse, Level 5-8	≤ 20 Sec for DMS user over Network LAN	9.74 sec	Green
Backbone Speed of Service	Normal - ≤ 20 min for speed of service	1.53 min	Green
Directory Accuracy (Data Errors)	≤ 2% detected via scan	1.3%	Green

Exhibit R-3 Cost Analysis		**DATE:** February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05	**PROGRAM ELEMENT** Defense Message System (DMS)/PE 0303129K	**PROJECT NAME AND NUMBER** Defense Message System/DM01

Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY07 Cost	FY 07 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	CPAF Comp	Lockheed Martin, Manassas, VA	20.775	4.334	05/05	9.437	05/06	7.120	05/07	0	41.666	41.666
	MIPR	NSA, Ft Meade, MD	0.047	0	N/A	0	N/A	0	N/A	0	0.047	0.047
Systems Engineering	FFRDC	MITRE, McLean, VA	3.424	0	N/A	0	N/A	0	N/A	0	3.424	3.424
	CPFF SS	NAVY/SPAWAR Charleston, SC	0.382	0	N/A	0	N/A	0	N/A	0	0.382	0.382
Subtotal Product Development			24.628	4.334		9.437		7.120				
Test and Evaluation												
Developmental Test & Evaluation	MIPR	Joint Inter-Operability Test Command (JITC), Indian Head, MD	6.696	0.800	10/04	2.750	10/05	2.750	10/06	0	12.966	12.966
	CPAF/ SS	Data Systems Analysts Fairfax, VA	1.570	0	N/A	0.550	01/06	0.550	01/07	0	2.670	2.670
Conduct ST&E	MIPR	Field Security Ops/ DISA, Letterkenny Army Depot, PA	0.000	0	N/A	0.080	06/06	0.080	06/07	0	0.160	0.160
Operational Test & Evaluation	MIPR	JITC Ft Huachuca, AZ	0.600	0.450	10/04	0.550	10/05	0.550	10/06	0	2.150	2.150
Subtotal Test and Evaluation			8.866	1.250		3.930		3.930				

Exhibit R-3 Cost Analysis		**DATE:** February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05	**PROGRAM ELEMENT** Defense Message System (DMS)/PE 0303129K	**PROJECT NAME AND NUMBER** Defense Message System/DM01

Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY07 Cost	FY 07 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Emergency Action Message (EAM) Support												
EAM Hybrid Solution	CPFF SS	John Hopkins, Baltimore, MD	0.382	0	N/A	0	N/A	0	N/A	0	0.382	0.382
	T&M Contract	SAIC	0.105	0	N/A	0	N/A	0	N/A	0	0.105	0.105
	MIPR	JITC Indian Head, MD	0.063	0	N/A	0	N/A	0	N/A	0	0.063	0.063
Subtotal EAM Support			0.550	0		0		0				
TOTAL			34.044	5.584		13.367		11.050				

Exhibit R-4 Schedule Profile | **Date: February 2005**

APPROPRIATION/BUDGET ACTIVITY	Program Element Number and Name	Project Number and Name
RDT&E, Defense-Wide/05	Defense Message System PE 0303129K	DMS/DM01

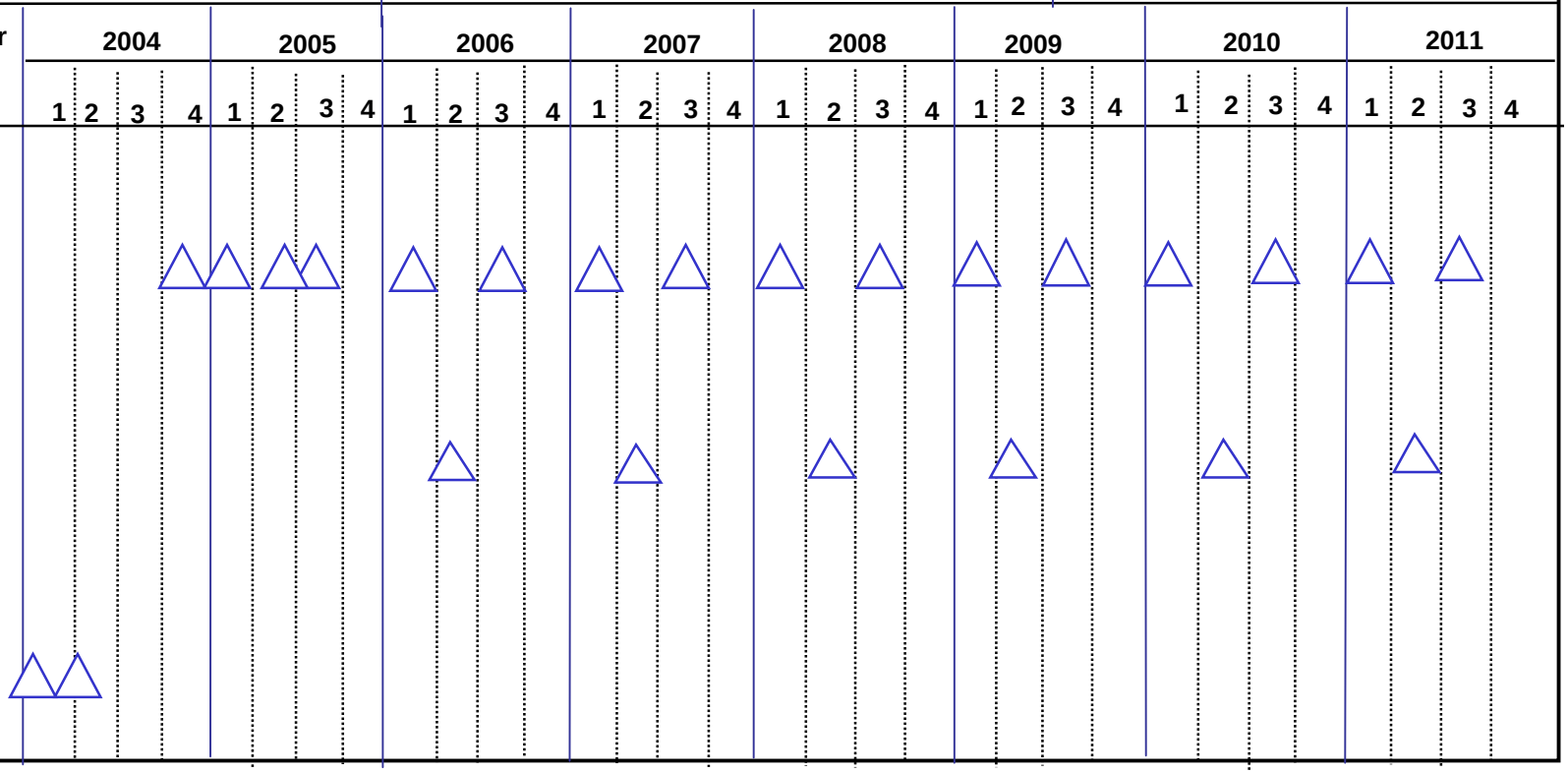

Exhibit R-4 Schedule Profile		Date: February 2005
APPROPRIATION/BUDGET ACTIVITY **RDT&E, Defense-Wide/05**	**Program Element Number and Name** **Defense Message System PE 0303129K**	**Project Number and Name** **DMS/DM01**

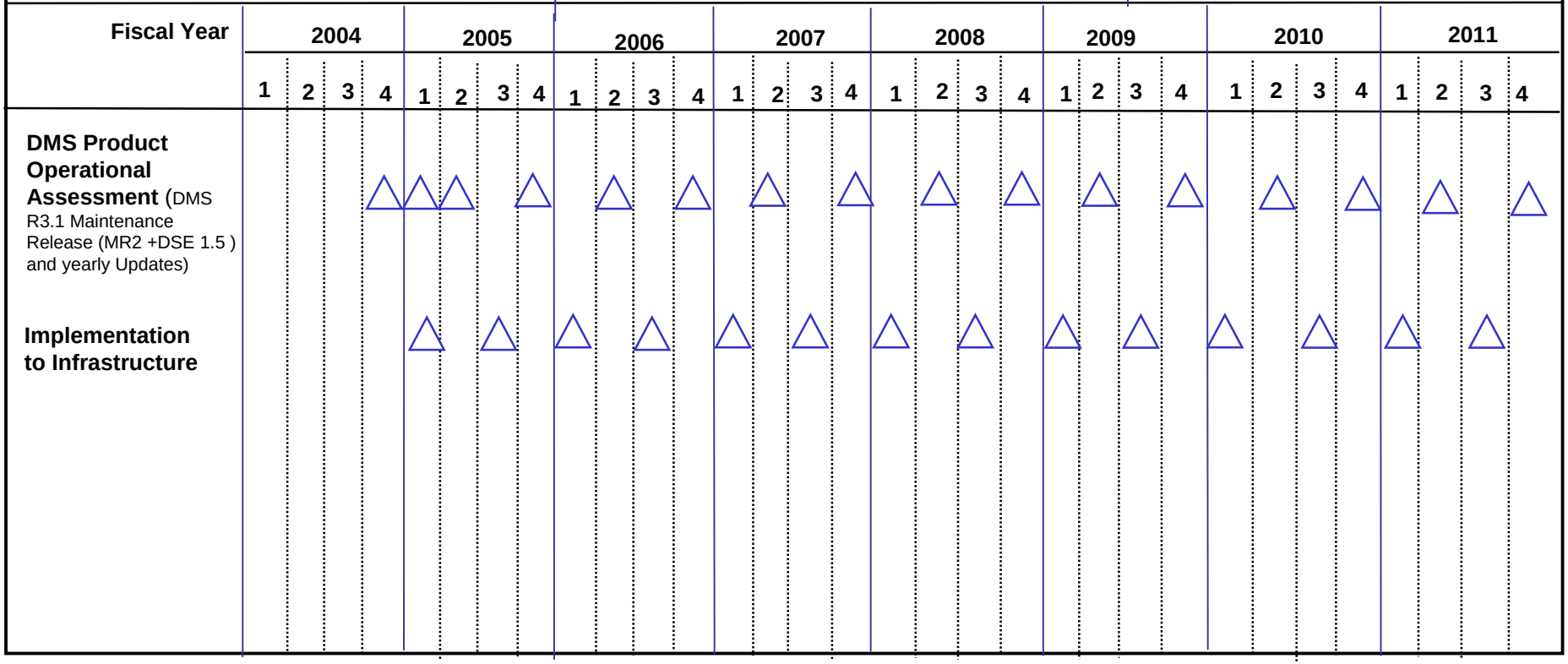

Exhibit R-4a Schedule Detail		**DATE:** February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05	**PROGRAM ELEMENT** Defense Message System / PE 0303129K	**PROJECT NAME AND NUMBER** DMS / DM01

Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Closure of DMS Transition Hubs (DTHs)	1Q – 2Q							
Begin Development Test of DMS R3.1 MR & yearly Updates	4Q	1Q - 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q
Security Product Development & Testing			2Q	2Q	2Q	2Q	2Q	2Q
R3.1 & R3-1 Update Operational Assessment	4Q	2Q & 4Q	2Q & 4Q	2Q & 4Q	2Q & 4Q	2Q & 4Q	2Q & 4Q	2Q & 4Q
Implementation To Infrastructure		1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q	1Q & 3Q