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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2021 Office of the Secretary Of Defense **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605027D8Z I OUSD(C) IT Development Initiative
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	77.446	9.219	9.590	10.259	0.000	10.259	10.592	10.912	11.341	11.653	Continuing	Continuing
927: <i>Next Generation Resource Management System</i>	39.984	1.219	4.983	4.221	0.000	4.221	4.346	4.487	4.695	4.871	Continuing	Continuing
930: <i>Defense Repository for Common Enterprise Data</i>	37.462	8.000	4.607	6.038	0.000	6.038	6.246	6.425	6.646	6.782	Continuing	Continuing

**Note**  
BUDGET REQUEST JUSTIFICATION: +\$10.259 million is required to support the following efforts:

- + \$4.221 million is required to support Next Generation Resource Management Systems.
- + \$6.038 million is required to support Defense Repository for Common Enterprise Data (Advana)

**A. Mission Description and Budget Item Justification**

As the Department of Defense strategic, operational, and tactical plans and objectives transform the war fighter with new capabilities and doctrine, the budgeting and accountability of funds used to pursue the Department objectives will become more complicated and detailed for senior leaders to make decisions with supporting rationale for the taxpayer. Incorporating information technology toward current and emerging business processes manifesting into a state-of-the-art system of systems will result in increasing efficiencies, timely diagnostics, and reducing lifecycle costs to maintain, sustain and repair.

This initiative exploits emerging technology, processes, trends, capabilities, and techniques to incorporate state-of-the-art information technology enabling the ability, agility, and level of fidelity to collect, process, administrate and report resource management data and to automate business processes within a more robust analytical environment within the Office of the Under Secretary of Defense (Comptroller) OUSD(C).

**NEXT GENERATION RESOURCE MANAGEMENT SYSTEM:**

The Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) is responsible for advising the Secretary of Defense on all Defense budgetary and fiscal matters, for Defense budget development and execution, and for overseeing financial management across the Department. The OUSD(C) has a broad set of responsibilities in supporting the Planning, Programing, Budget and Execution (PPBE) process. The Office of the Director, Cost Assessment and Program Evaluation (CAPE), provides independent analytic advice to the Secretary of Defense on all aspects of the Defense program, including alternative weapon systems and force structures, the development and evaluation of program and defense program alternatives, and the cost-effectiveness of defense systems. There is a critical need for the development of a state-of-the-art information technology system to modernize and replace multiple, antiquated legacy systems and processes used to formulate, justify, present and defend the entire Department of Defense Budget in the Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) to meet Title 10 and Title 31 mission and

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reporting requirements. The Comptroller's plan for mitigating the deficiencies and capability gaps associated with current systems is development of the Next Generation Resource Management System.

OUSD(C) and CAPE use multiple systems to formulate, justify, distribute, and execute DoD budgets. The information managed by the budget formulation and programming systems is redundant, and reconciliation of information is difficult and inefficient. These systems require extensive manpower investments to give executives the information they need to make key financial decisions in a timely manner.

The OUSD(C) and CAPE require a more efficient, effective Defense budget environment that optimizes the budget cycle to ensure users are processing and reporting efficiently and DoD Senior Leadership has the information to make informed, critical decisions.

The OUSD(C) requires capabilities that shall provide for the effective formulation, and justification of the Defense budget. The requirement is for:

- Automated exchange and reconciliation of budget data
- Improved efficiency through the utilization of a unified budgetary model
- Instantaneous ability to generate data for management reviews and decisions
- Capability to accommodate emerging business practices

Moving forward, the new "to be" system shall be designed as a single system with a unified data source for OUSD(C) and CAPE. The new system shall provide a single, integrated system that employs the latest technologies to fulfill the Department's financial management responsibilities in an effective and efficient manner. The new system shall provide twenty-first century information technology that shall allow users to view information from multiple fully integrated modules simultaneously, e.g., current year budget submission, decision documents from previous years, and budget execution information.

**DEFENSE REPOSITORY FOR COMMON ENTERPRISE DATA:**

Defense Repository for Common Enterprise data (Advana) support financial audit, cost management, performance management, and readiness.

The DoD Advana requires:

- All supporting Department data that rolls up to the DoD financial statement (detailed accounting data reconciled to the financial statement)
- Proof of the completeness of all transactional data reported within the UoT (detailed accounting data reconciled to business events)
- Ability to extract subset populations
- Ability to secure and protect the data within the UoT

The failure to meet these requirements will result in the Department unable to successfully conduct and pass an audit.

To achieve these requirements, the Office of the Under Secretary of Defense (Comptroller) is creating a tool called the Defense Repository for Common Enterprise Data (Advana). This tool has the potential to significantly improve DoD's capability and capacity to handle large volumes of standard and non-standard business and

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readiness data. Both an application and analytical platform, the Advana leverages an open-source software framework for storing data and running applications to deliver a complete Advana.

The first phase of Advana implementation is a proof of concept with the U.S. Special Operations Command (USSOCOM) systems to develop a baseline application and configuration. When the first phase has been successfully completed, the second phase will integrate into the full solution any remaining accounting and business feeder systems that execute TI-97 funds and be the solution for DATA Act. The proof of concept was successful and the program moved to an operations phase in FY18.

DRCED is a joint effort between Office of the Deputy Chief Financial Officer (ODCFO), Office of the Chief Management Officer (ODCMO), Office of the Chief Information Officer (OCIO), USSOCOM, and the Defense Finance and Accounting Service (DFAS).

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Previous President's Budget	9.568	15.653	14.274	-	14.274
Current President's Budget	9.219	9.590	10.259	-	10.259
Total Adjustments	-0.349	-6.063	-4.015	-	-4.015
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-6.063			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.349	-			
• Realignment	-	-	-1.500	-	-1.500
• Other Adjustment	-	-	-0.103	-	-0.103
• Economic Assumptions Reduction	-	-	-0.012	-	-0.012
• Defense Wide Review Reduction	-	-	-2.400	-	-2.400

**Change Summary Explanation**

FY 2021 BUDGET REQUEST JUSTIFICATION: +\$4.221 million is required to support Next Generation Resource Management System (NGRMS).and \$6.038 million is required to support Defense Repository for Common Enterprise Data.

The FY2021 funding request was reduced by \$2.400 million during the Defense Wide Review to account for implementing efficiencies in the acquisition strategy for NGRMS.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Office of the Secretary Of Defense										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 0400 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605027D8Z / OUSD(C) IT Development Initiative				<b>Project (Number/Name)</b> 927 / Next Generation Resource Management System			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
927: Next Generation Resource Management System	39.984	1.219	4.983	4.221	0.000	4.221	4.346	4.487	4.695	4.871	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Realignment of \$1.5M to PE: 0903388D8Z

**A. Mission Description and Budget Item Justification**

The Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) is responsible for advising the Secretary of Defense on all Defense budgetary and fiscal matters, for Defense budget development and execution, and for overseeing financial management across the Department. The OUSD(C) has a broad set of responsibilities in supporting the Planning, Programming, Budget and Execution (PPBE) process. The Office of the Director, Cost Assessment and Program Evaluation (CAPE), provides independent analytic advice to the Secretary of Defense on all aspects of the Defense program, including alternative weapon systems and force structures, the development and evaluation of programs and defense program alternatives, and the cost-effectiveness of defense systems.

OUSD(C) and CAPE use multiple systems to formulate, justify, distribute, and execute DoD budgets. The information managed by the budget formulation and programming systems is redundant, and reconciliation of information is difficult and inefficient. These systems require extensive manpower investments to give executives the information they need to make key financial decisions in a timely manner.

The OUSD(C) and CAPE require a more efficient, effective Defense budget environment that optimizes the budget cycle to ensure users are processing and reporting efficiently and DoD Senior Leadership has the information to make informed, critical decisions.

The OUSD(C) requires capabilities that shall provide for the effective formulation, and justification of the Defense budget. The requirement is for:

- Automated exchange and reconciliation of budget data
- Improved efficiency through the utilization of a unified budgetary model
- Instantaneous ability to generate data for management reviews and decisions
- Capability to accommodate emerging business practices

Moving forward, the new “to be” system shall be designed as a single system with a unified data source for OUSD(C) and CAPE. The new system shall provide a single, integrated system that employs the latest technologies to fulfill the Department’s financial management responsibilities in an effective and efficient manner. The new system shall provide twenty-first century information technology that shall allow users to view information from multiple fully integrated modules simultaneously, e.g., current year budget submission, decision documents from previous years, and budget execution information.

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<p><b>Title:</b> Next Generation Resource Management System</p> <p><b>Description:</b> Plan, develop, test and evaluate the system components (i.e. unified database, expert system, cross domain security, enterprise service bus, applications, services) and supportability requirements in modernizing the budget formulation, programming execution and reporting capabilities for the Department of Defense. Activities will include, but not be limited to, the preparation of all documentation required for Clinger-Cohen Compliance and acquisition regulations, developing requests for proposals, and oversight and management of contracts and deliverables.</p> <p><b>FY 2020 Plans:</b> FY 2020 planned development will include the development of a Single Submission prototype with the results used to structure the design, development, testing and deployment of future NGRMS increments. FY 2020 plans also include the milCloud build of the Development, Production, and COOP environments for NGRMS.</p> <p><b>FY 2021 Plans:</b> FY 2021 planned development will include the development, developmental and operational test, and deployment of the production interfaces. Development and developmental test of the reporting/analytic tool will start in FY 2021.</p> <p><b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Decrease is due to \$1.500 million realignment to O&amp;M to fund the sustainment of the NGRMS milCloud environments and single submission capability.</p>	1.219	4.983	4.221
<b>Accomplishments/Planned Programs Subtotals</b>	1.219	4.983	4.221

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

**Remarks**

**D. Acquisition Strategy**  
Agile development on a smaller scale to replace legacy mission subsystems capabilities.





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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Office of the Secretary Of Defense		<b>Date:</b> February 2020
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>NGRMS</b>				
Single Submission	3	2018	4	2020
Database Consolidation	1	2020	3	2020
Data Analytics	1	2020	3	2021
MilCloud Infrastructure	3	2020	3	2021
Complete Single Submission Product Interfaces	3	2020	3	2022
Tie in Enactment/Accounting System	1	2023	4	2023
B2A/EFD NGRMS	4	2023	3	2025
B2A/EFD MILCloud Infrastructure	3	2024	1	2025

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<b>Appropriation/Budget Activity</b> 0400 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605027D8Z / OUSD(C) IT Development Initiative				<b>Project (Number/Name)</b> 930 / Defense Repository for Common Enterprise Data			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
930: Defense Repository for Common Enterprise Data	37.462	8.000	4.607	6.038	0.000	6.038	6.246	6.425	6.646	6.782	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**  
+\$6.038 million is required to support Defense Repository for Common Enterprise Data (Advana).

**A. Mission Description and Budget Item Justification**

Without a single Defense Repository for Common Enterprise Data (Advana) to support the TI97 General Fund for the 4th Estate the Department will be incapable of asserting readiness for an independent audit of the consolidated financial statements. All DoD organizations are pursuing the current statutory goal of achieving the state of audit that supports entry into a full financial statement of audit in FY 2018 with an initial opinion rendered in mid-FY 2019. Without an automated capability to provide a transactional universe for sampling and evidentiary proof the department will not be in compliance with public law.

The requested funds will be used to buy “Big Data” software and hardware infrastructure and required contractor services to implement the technology to meet the UoT requirement. These funds also include subject matter expertise costs for DCFO and funds to be placed on a contract for hardware, software, and labor. This will not result in hiring additional government personnel.

The Defense Repository for Common Enterprise Data (Advana) will have the capability to:

- Ingest data from multiple accounting and financial feeder systems
- Normalize data from multiple sources providing a common data architecture
- Reconcile transactional details to summary financial data
- Provide auditor’s the ability to sample TI-97 detailed transactions
- Business Analytics/Reporting
- DATA Act which is a statutory requirement to be completed by May 2017
- Provide NIPR and SIPR capability for non-sensitive and sensitive data

This effort will expand in scope to support other enterprise analytics efforts like cost management, performance management, and readiness. The scope is to bring in data from an estimated 50 systems and demonstrate existence and completeness of business and accounting transaction data, which are capabilities required for audit readiness and other analytical use cases.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> Defense Repository for Common Enterprise Data (Advana)	8.000	4.607	6.038

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<p><b>Description:</b> Plan, develop, test and evaluate the system components (i.e. unified database, cross domain security, applications, services) and supportability requirements in creating a universe of transactions for the Defense Wide General Fund Appropriation financial audit, cost management, performance management, and readiness.</p> <p>The funds will be used to support increments eleven, twelve, and thirteen per the schedule.</p> <p><b>FY 2020 Plans:</b> FY20 continues the development of a Defense Repository for Common Enterprise Data (Advana) to aggregate and fuse multiple data sources to make business and analytical decisions, find data inconsistencies and improve financial audits across the DoD.</p> <p><b>FY 2021 Plans:</b> FY21 continues the development of a Defense Repository for Common Enterprise Data(Advana) to accelerate analytics, improve user success and Advana adoption, provide a stable and robust infrastructure across the DoD.</p> <p><b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Continues the development of a Defense Repository for Common Enterprise Data(Advana) to accelerate analytics, improve user success and Advana adoption, provide a stable and robust infrastructure across the DoD.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	8.000	4.607	6.038

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

**Remarks**

**D. Acquisition Strategy**  
Leveraging existing contracts to continue development.

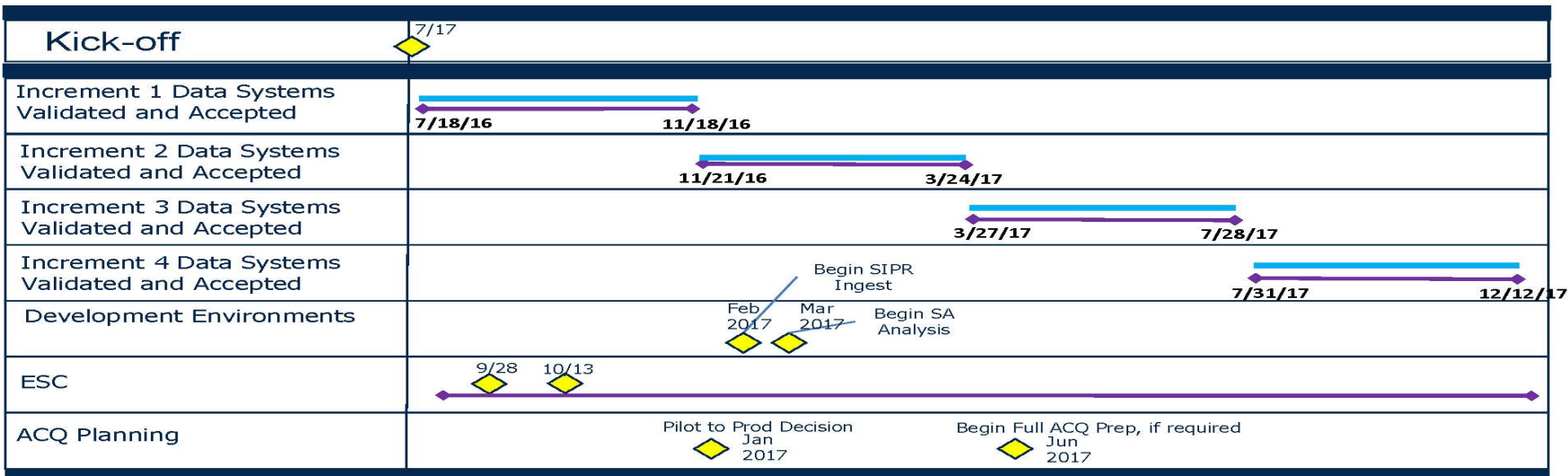


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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2021 Office of the Secretary Of Defense		<b>Date:</b> February 2020
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## ADVANA Schedule Overview

Increments	1				2				3				4			
Sprints	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



▬ Progress  
▬ Current Plan

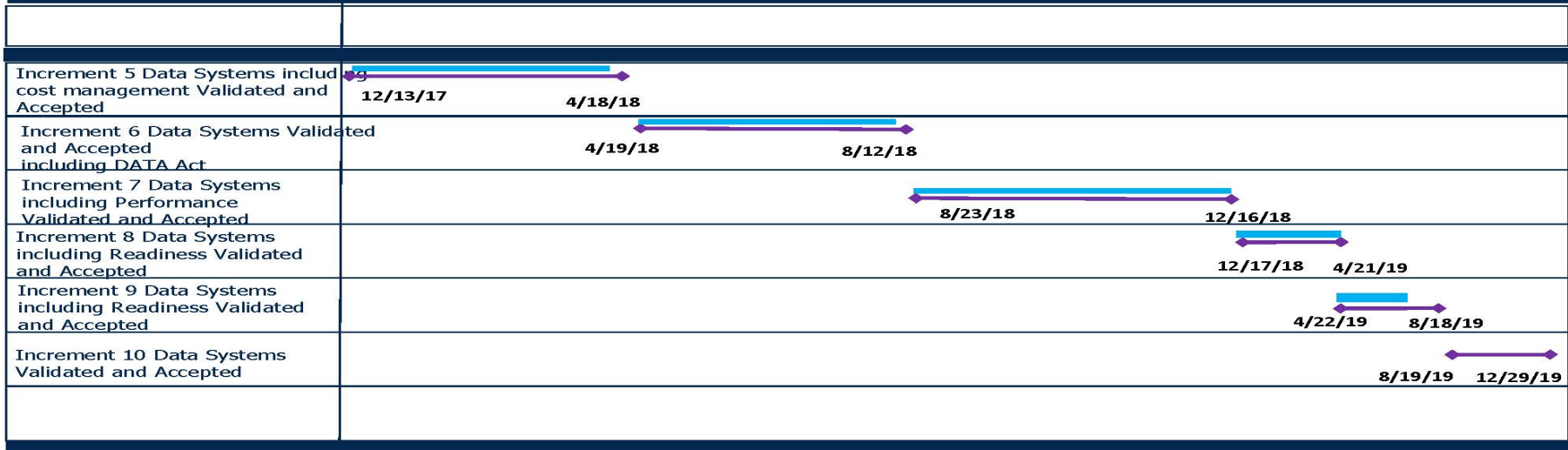
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## ADVANA Schedule Overview Cont.

Increments	5				6				7				8	9	10		
Sprints	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31 - 38	39 - 46	47 - 53



 Progress  
 Current Plan

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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Acquisiiton Milestone</b>				
Development and ingest further data	4	2019	4	2025