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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0203761N / <i>Rapid Technology Transition (RTT)</i>							
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	14.066	8.323	8.632	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	31.021
3173: <i>Technology Insertion Program for Savings (TIPS)</i>	14.066	8.323	8.632	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	31.021

A. Mission Description and Budget Item Justification

MISSION:

The Technology Insertion Program for Savings (TIPS) transitions technology from any source, including those not traditionally associated with defense technology. An effective and robust integration of commercial and military technologies can reduce costs by keeping pace with the fast moving changes in technologies and operational needs. The TIPS program is structured to bring transition deals to closure quickly, and to provide execution year funding for a quick start, bridging the gap until the program of record can fund the completion of the technology insertion.

The mission of the TIPS program is to increase the rate that new cutting edge technologies are inserted into DON acquisition programs in order to significantly reduce operations and maintenance support costs. Opportunities occur when a sufficiently mature technology is identified that can meet a particular need on a timetable which matches that of an acquisition program, and is supported by a business case which justifies the associated cost and schedule risk. The combination of circumstances which create such opportunities can appear, and disappear, well inside the normal budget cycle. This program is designed to be proactive in identifying opportunities and to work with resource sponsors, fleet and force users, and Program Managers (PMs) in constructing viable technology transition deals, one at a time. To ensure the widest possible awareness of emergent commercial technology opportunities, this program interacts with the industry and coordinates closely with Program Executive Offices (PEOs) and Program Managers (PMs) to maintain awareness of insertion opportunities. Utilizing existing authorities, TIPS applies execution year funds where necessary to "jump-start" transitions so they can be inserted and validated leading directly to deployment and/or demonstrations of high risk/high payoff technologies. This Program Element is the only Navy program that addresses current opportunities to reduce operations and support (O&S) cost drivers within a 18-24 month period. As such, planning and initiation are accomplished within the same fiscal year, which causes a non-traditional financial execution profile for the program. The program therefore does not meet traditional expenditure benchmarks for the first year of execution, but rapidly recovers in the second year.

Funding increases to TIPS reflect emphasis on increasing the number of projects that reduce operations and support costs, since the number of projects funded is directly proportional to the cost benefits provided to DoN, and demand continues to grow as operations and sustainment budgets experience increased downward pressure.

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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	8.480	18.632	19.867	-	19.867
Current President's Budget	8.323	8.632	0.000	-	0.000
Total Adjustments	-0.157	-10.000	-19.867	-	-19.867
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-10.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.157	0.000			
• Program Adjustments	0.000	0.000	-19.867	-	-19.867

Change Summary Explanation

The FY 2016 funding request was reduced by -\$0.5 million to account for the availability of prior year execution balances.

Beginning in FY 2017, funding is realigned to PE 0603382N for Rapid Prototype Development.

Technical: Not applicable.

Schedule: Not applicable.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0203761N / <i>Rapid Technology Transition (RTT)</i>			Project (Number/Name) 3173 / <i>Technology Insertion Program for Savings (TIPS)</i>				
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
3173: <i>Technology Insertion Program for Savings (TIPS)</i>	14.066	8.323	8.632	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	31.021
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The mission of the Technology Insertion Program for Savings (TIPS) is to fund smart solutions for rapid insertion of new technologies that are inserted into DON acquisition programs in order to reduce operations and maintenance support costs across DoN acquisition programs. The TIPS program is structured to quickly transition applicable commercial off-the-shelf solutions and late-stage development technologies from any source, to meet emerging opportunities that lead to cost efficiencies in operations, maintenance, support, training, and/or logistics, and is supported by a business case that justifies all associated costs and schedule risks while demonstrating a positive return on investment (ROI) that is quantifiable and clearly explained given realistic assumptions. TIPS provides execution year funding for a rapid start, bridging the gap until the program of record can fund the completion of the technology insertion.

Funding increase from FY15 through FY16 provides continuity for executing efforts already committed in FY14 and FY15, ensuring benefits are realized once efforts have transitioned to meet current needs.

Beginning in FY 2017, funding is realigned to new PE 0603382N for Rapid Prototype Development.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: TECHNOLOGY INSERTION PROGRAM FOR SAVINGS (TIPS)	8.323	8.632	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments:					
Initiated 6-8 new TIPS projects to improve naval warfighting capabilities by inserting new technologies that will improve overall maintenance and sustainment of current systems by replacing, modifying, or creating more efficient components, software, and processes that will significantly increase the performance, reliability, and integrity of legacy systems while reducing overall operational and support costs across all DoN acquisition programs.					
Projects that Completed in FY2015: (Name & ROI% Averaged Over 5 years)					
- Improved Low Cost Gyro Stabilized Heading Sensor: ROI% 465					
- SPAWAR Quick Reference Guide: ROI% 1151					
- Transportation Exploitation Tool 2 (TET2): ROI% 601					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
- Framework for Accessing Cost & Technology (FACT) for C4I: ROI% 331					
Projects Continuing to Execute through FY2015: (Name & ROI% Averaged Over 5 years)					
- Virginia Class TEMPALT Electronics Rack: ROI% 961					
- Modified Induction Heat Technology for Reduced Cost Removal of Special Hull Treatment: ROI% 754					
- Advanced Buoyant Cable Antenna (ABCA): ROI% 38					
- Lot Serial Number Accuracy (LSNA): ROI% 360					
- LCS Class 1 Stern Tube Seal Design Improvements: ROI% 7540					
- Interactive Structural Analysis Environment & Management System: ROI% 11809					
- Submarine Combat System Architecture Modernization: ROI% 1408					
- Autonomous Target Acquisition Weapon Image Source Expansion: ROI% 469					
- Remote Mine-hunting System Cable Maintenance Winch: ROI% 367					
- Intermediary Application for Key Management Infrastructure: ROI% 690					
- Navy Nuclear Command, Control, & Comms Emergency Action Message Enhanced Technology (NEET): ROI % 438					
- Virtualization in Submarine Warfare Federated Tactical System (V-SWFTS): ROI% 4254					
- Radar Technology Engineering Upgrades A, B, & C					
(A) ROI% 313					
(B) ROI% 120					
(C) ROI% 92					
FY 2016 Plans:					
Continue efforts from FY 2015 unless otherwise noted as complete.					
Projects Receiving all Remaining Funds in FY2016 to Complete Transitions: (Name & ROI% Averaged Over 5 years)					
- Virginia Class TEMPALT Electronics Rack: ROI% 961					
- Modified Induction Heat Technology for Reduced Cost Removal of Special Hull Treatment: ROI% 754					
- Advanced Buoyant Cable Antenna (ABCA): ROI% 38					
- Lot Serial Number Accuracy (LSNA): ROI% 360					
- LCS Class 1 Stern Tube Seal Design Improvements: ROI% 7540					
- Interactive Structural Analysis Environment & Management System: ROI% 11809					
- Submarine Combat System Architecture Modernization: ROI% 1408					
- Autonomous Target Acquisition Weapon Image Source Expansion: ROI% 469					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<ul style="list-style-type: none"> - Remote Mine-hunting System Cable Maintenance Winch: ROI% 367 - Intermediary Application for Key Management Infrastructure: ROI% 690 - Navy Nuclear Command, Control, & Comms Emergency Action Message Enhanced Technology (NEET): ROI % 438 - Virtualization in Submarine Warfare Federated Tactical System (V-SWFTS): ROI% 4254 - Radar Technology Engineering Upgrades A, B, & C <ul style="list-style-type: none"> (A) ROI% 313 (B) ROI% 120 (C) ROI% 92 <p>New Start Projects Cancelled in FY2016 - Funds realigned for Rapid Prototype Development: (Name & ROI% Avg Over 5 years)</p> <ul style="list-style-type: none"> - Close-In Weapon System Upgrades for CCA & Gyro : ROI% 710 - Close-In Weapon System Upgrades for Stabilization Motor Upgrades: ROI% 650 - Flexible Signals Exploitation Utilizing a Framework Platform: ROI% 1120 - Universal Naval Aluminum Degree of Sensitization (DoS) Probe: ROI% 6888 - Personal Property Transportation Audit Systems: ROI% 225 - In-Situ Repair of 500KW Motor Generator Sets: ROI% 801 - Energy Absorbing Aerial Refueling Hose: ROI% 207 - CANES Rapid Installation Key Enabling Technologies: ROI% 431 - Low Cost Enabling Mine-hunting Sonar Timing Software: ROI% 1397 - Interactive Culturally Accurate AvataR: ROI% 429 - Multiband Broadband Antenna for Navy Ships: ROI% 759 <p>FY 2017 Base Plans: Funding realigned to PE 0603382N for Rapid Prototype Development.</p> <p>FY 2017 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	8.323	8.632	0.000	0.000	0.000

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

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C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

Utilize existing authorities on a case-specific basis to exploit rapid technology transition opportunities.

E. Performance Metrics

The TIPS program will initiate new projects each year that provide for new, innovative, and potentially disruptive technology being inserted into DON acquisition programs. The TIPS projects will have a greater than 70% success rate of insertion and fielding of technology into DON warfighting systems and/or operations and support cost efforts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy													Date: February 2016		
Appropriation/Budget Activity 1319 / 7				R-1 Program Element (Number/Name) PE 0203761N / Rapid Technology Transition (RTT)					Project (Number/Name) 3173 / Technology Insertion Program for Savings (TIPS)						
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LCS 1 Class Stern Tube	C/FFP	NSWC : Carderock, MD	0.721	1.013	Oct 2014	0.214	Oct 2015	0.000		-		0.000	0.000	1.948	-
Improved Low Cost Gyro	WR	NUWC : Newport, RI	1.030	0.000		0.000		0.000		-		0.000	0.000	1.030	-
Advance Capability Bouyant Cable Antenna	C/FFP	NUWC : Newport, RI	1.618	0.293	Oct 2014	0.000		0.000		-		0.000	0.000	1.911	-
Lot Serial Number Accuracy	C/CPFF	NAVSUP : Mechanicsburg, PA	0.808	0.829	Oct 2014	0.000		0.000		-		0.000	0.000	1.637	-
Transportation Exploitation Tool (TET 2)	C/CPFF	NAVFAC EXWC : Port Hueneme, CA	2.000	0.000		0.000		0.000		-		0.000	0.000	2.000	-
VA Class Submarine TEMPALT Electronics Rack	WR	NUWC : Newport, RI	1.200	0.180	Oct 2014	0.000		0.000		-		0.000	0.000	1.380	-
SPAWAR Quick Reference Guides	C/IDIQ	SPAWAR : San Diego, CA	0.150	0.043	Oct 2014	0.000		0.000		-		0.000	0.000	0.193	-
FACT for C4I	Various	GTRI : Various	0.810	0.000		0.000		0.000		-		0.000	0.000	0.810	-
Interactive Structural Analysis Environment & Management System	C/BOA	ESRD : St.Louis, MO	0.600	0.605	Oct 2014	0.795	Oct 2015	0.000		-		0.000	0.000	2.000	-
Submarine Combat System Architecture Modernization	C/CPIF	General Dynamics : Pittsfield, MA	0.616	0.607	Oct 2014	0.627	Oct 2015	0.000		-		0.000	0.000	1.850	-
Autonomous Target Acquisition Weapon Image Source Expansion	Various	Various : Various	0.700	0.560	Oct 2014	0.240	Oct 2015	0.000		-		0.000	0.000	1.500	-
Remote Minehunting System Cable Maintenance Winch	C/IDIQ	NAVSEA PMS 403 : Washington DC	0.500	0.700	Oct 2014	0.300	Oct 2015	0.000		-		0.000	0.000	1.500	-
Modified Induction Heat Technology for Reduced Cost Removal of SHT	WR	NRL : Washington DC	0.400	0.150	Oct 2014	0.000		0.000		-		0.000	0.000	0.550	-
Intermediary Application for Key Management Infrastructure	WR	SPAWAR : San Diego, CA	0.055	0.445	Oct 2014	1.500	Oct 2015	0.000		-		0.000	0.000	2.000	-

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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Navy Nuclear Command, Control & Comms Emergency Action Message Enhanced Technology (NEET)	WR	SSC PAC : San Diego, CA	0.000	1.000	Oct 2014	1.000	Oct 2015	0.000		-		0.000	0.000	2.000	-
Virtualization in Submarine Warfare Federated Tactical System	C/CPFF	Progeny Systems : Manassas, VA	0.000	0.330	Oct 2014	1.670	Oct 2015	0.000		-		0.000	0.000	2.000	-
Radar Technology Engineering Upgrades	Various	Various(Gov/ Contract mix) : Various locations	0.000	0.264	Oct 2014	0.816	Oct 2015	0.000		-		0.000	0.000	1.080	-
Subtotal			11.208	7.019		7.162		0.000		-		0.000	0.000	25.389	-

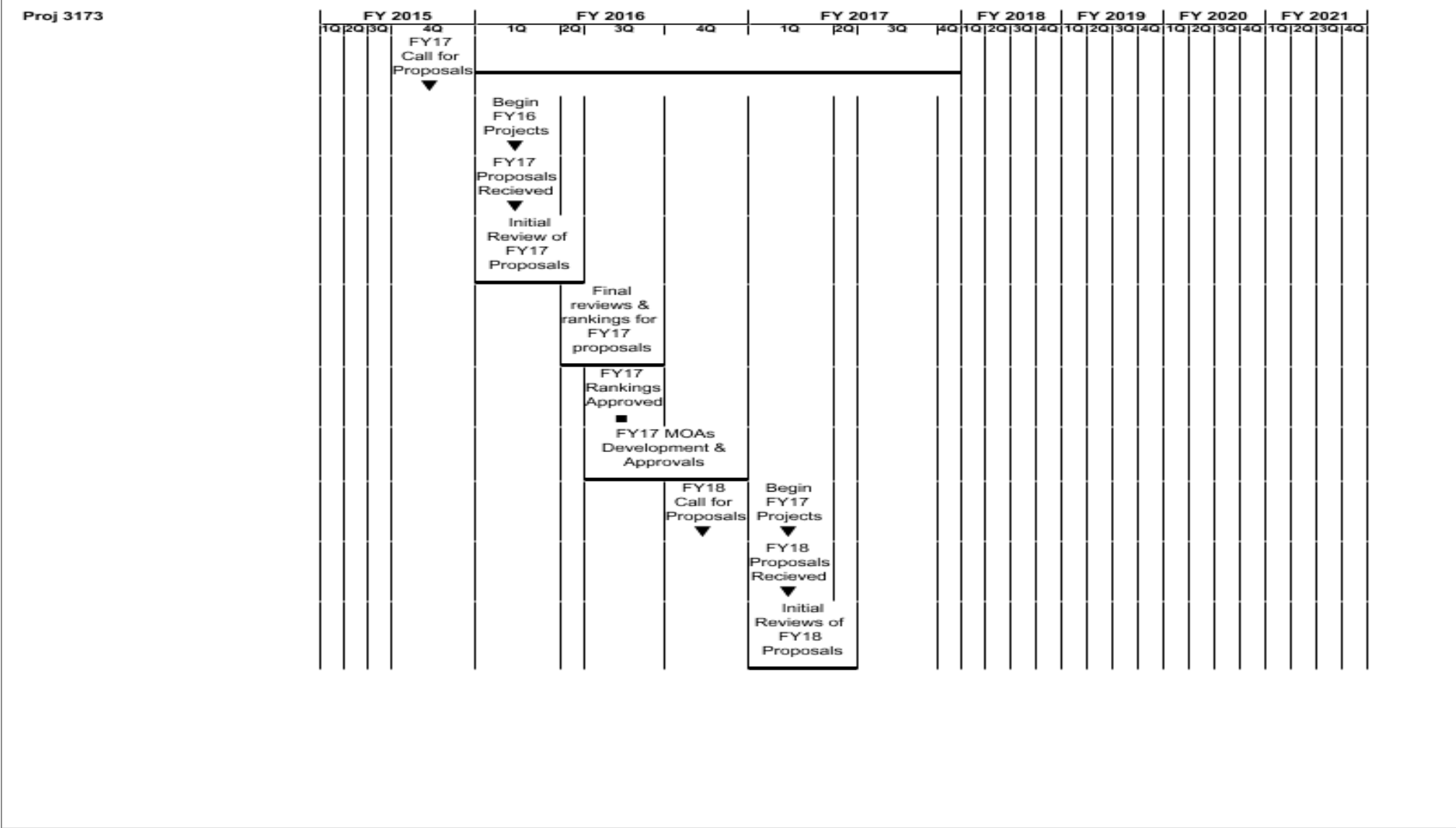
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Various	Various	Various : Various	2.858	1.304	Oct 2014	1.470	Oct 2015	0.000		-		0.000	0.000	5.632	Continuing
Subtotal			2.858	1.304		1.470		0.000		-		0.000	0.000	5.632	-

			Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			14.066	8.323	8.632	0.000	-	0.000	0.000	31.021	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0203761N / <i>Rapid Technology Transition (RTT)</i>	Project (Number/Name) 3173 / <i>Technology Insertion Program for Savings (TIPS)</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0203761N / <i>Rapid Technology Transition (RTT)</i>	Project (Number/Name) 3173 / <i>Technology Insertion Program for Savings (TIPS)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3173				
Oversee Execution of Projects	1	2016	4	2017
FY17 Call for Proposals	4	2015	4	2015
Begin Selected FY16 Projects	1	2016	1	2016
FY17 Proposals Recieved	1	2016	1	2016
FY17 Initial Review of Proposals	1	2016	2	2016
TIPS WG conducts final reviews and ranking	2	2016	3	2016
Dir. of Technology approves FY17 rankings	3	2016	3	2016
FY17 MOAs drafted, Staffed and approved	3	2016	4	2016
FY18 Call for Proposals	4	2016	4	2016
Begin Selected FY17 Projects	1	2017	1	2017
FY18 Proposals Recieved	1	2017	1	2017
FY18 Initial Reviews of Proposals	1	2017	2	2017
FY18 TIPS WG conducts final reviews and ranking	2	2017	3	2017
Dir of Technology approves FY18 rankings	3	2017	3	2017

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