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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0401115F I C-130 Airlift Squadron							
COST (\$ in Millions)	Prior Years ⁽⁺⁾	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	1,483.349	47.700	-	33.962	-	33.962	58.905	72.849	49.231	2.277	-	1,748.273
675244: C-130 CNS/ATM	4.929	47.700	-	-	-	-	-	-	-	-	-	52.629
675248: C-130 VAAP INCREMENT 1	0.000	-	-	33.962	-	33.962	58.905	72.849	49.231	2.277	-	217.224
Program MDAP/MAIS Code: 298												

⁽⁺⁾ The sum of all Prior Years is \$1478.420 million less than the represented total due to several projects ending

A. Mission Description and Budget Item Justification

Reflect funding for the C-130 Avionics Modernization Program (AMP); the FY15PB C-130 Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) program; and the FY16 PB C-130H Viability and Airspace Access Program (VAAP) Increment 1 modification.

Note, in the FY16 PB, the FY15 PB C-130 CNS/ATM program has been updated and renamed C-130H VAAP Increment 1.

All of PE 41115F FY14 RDT&E funds (\$47.7M--of which \$47.3M is AMP and \$0.4M is CNS/ATM) are loaded under the C-130 CNS/ATM program, and will be used to the execute the C-130H VAAP Increment 1 mod.

The C-130 AMP RDT&E funding has been deleted as a result of proposed program cancellation in the FY13 PB. However, Congress added \$47.3M RDT&E in FY14 to continue C-130 AMP.

FY13 PB "Optimize" and FY14 PB "Minimize" C-130 CNS/ATM programs were proposed new start in-lieu-of C-130 AMP, and provided CNS/ATM solution for the legacy C-130H combat delivery fleet, addressed select obsolescence issues, and retained the navigator position. However, these new start programs did not receive congressional approval.

FY15 NDAA and Appropriation Bill allow AF to use prior and current-year AMP funds (RDT&E and APAF) for safety and airspace compliance modification programs (i.e., the FY15 PB C-130 CNS/ATM program and FY16 PB C-130 VAAP Increment 1 mod).

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force				Date: February 2015	
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0401115F I C-130 Airlift Squadron			
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	47.700	-	12.378	-	12.378
Current President's Budget	47.700	-	33.962	-	33.962
Total Adjustments	-	-	21.584	-	21.584
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	21.584	-	21.584
Change Summary Explanation					
The Air Force accelerated the C-130 VAAP Increment 1 program by adding \$21,584M in FY16; these funds allow the ADS-B Out phase of the program to deliver the first airspace compliant RDT&E aircraft in FY17 (two years earlier than the FY15 PB program).					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675244 / C-130 CNS/ATM			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675244: C-130 CNS/ATM	4.929	47.700	-	-	-	-	-	-	-	-	-	52.629
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

All of PE 41115F FY14 RDT&E funds (\$47.7M--of which \$47.3M is AMP congressional add and \$0.4M is CNS/ATM) are loaded under the C-130 CNS/ATM program, and will be used to the execute the C-130H VAAP Increment 1 mod.

A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) RDT&E funding has been deleted as a result of proposed program cancellation in the FY13 PB; however, Congress has not approved C-130 AMP's cancellation.

The FY15 PB C-130 Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) programs was a proposed new start in-lieu-of C-130 AMP, provided safety and airspace compliance solution for the legacy C-130H combat delivery fleet, and retained the navigator position.

FY15 NDAA prevented C-130 AMP cancellation, but allowed the Air Force to proceed with an alternate safety and airspace compliance modification program; i.e., the FY15 PB C-130 CNS/ATM program.

In the FY16 PB, the FY15 PB C-130 CNS/ATM program has been updated and renamed C-130H Viability and Airspace Access Program (VAAP) Increment 1.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: C-130 CNS/ATM	47.700	-	-	-	-
Description: Refine and complete the requirements definition phase of program followed by integration planning.					
FY 2014 Accomplishments: Refine and complete the requirements definition phase of program followed by integration planning.					
FY 2015 Plans: Refine and complete the requirements definition phase of program followed by integration planning.					
FY 2016 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015				
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675244 / C-130 CNS/ATM						
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
In the FY16 PB, all C-130 CNS/ATM pgm funds and activities have been moved to the C-130H (VAAP) Increment 1 mod.														
Accomplishments/Planned Programs Subtotals										47.700	-	-	-	-
C. Other Program Funding Summary (\$ in Millions)														
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost			
• APAF: BA05: Line Item # C13000: C-130 CNS/ATM	14.200	14.598	-	-	-	-	-	-	-	-	28.798			
Remarks														
The C-130 CNS/ATM program was renamed/replaced in the FY16 PB with the C-130 Viability and Airspace Access Program (VAAP) Increment 1. All other program funding summary are detailed in the C-130 VAAP Increment 1 program.														
D. Acquisition Strategy														
The C-130 CNS/ATM program acquisition strategy completed the program in three phases: Phase A, 8.33 kHz radios; Phase B, updated CVR/DFDR; and Phase C, ADS-B Out and Enhanced Mode S. Most of the RDT&E funding was for the ADS-B Out effort.														
ADS-B Out: Once integrated, early years primarily involved with defining the program requirements and pre-contract efforts in preparation for the EMD source selection phase. Current schedule reflects the ADS-B Out EMD contract to be awarded, following a competitive source selection, by 2nd quarter FY17.														
E. Performance Metrics														
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675244 / C-130 CNS/ATM					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
EMD Contract	C/TBD	TBD : ,	0.000	47.300		-		-		-		-	-	47.300	-
Subtotal			0.000	47.300		-		-		-		-	-	47.300	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
Developmental Flight Test	TBD	Not specified. : ,	0.000	-		-		-		-		-	-	-	12.404
Subtotal			0.000	-		-		-		-		-	-	-	12.404
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
PMA - Contractor Services	Various	Not specified. : ,	4.329	0.339		-	Mar 2015	-		-		-	-	4.668	4.688
PMA - Gov't Cost	Various	Not specified. : ,	0.600	0.061		-	Mar 2015	-		-		-	-	0.661	0.661
Subtotal			4.929	0.400		-		-		-		-	-	5.329	5.349
			Prior Years	FY 2014	FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			4.929	47.700		-		-		-		-	-	52.629	17.753
Remarks															
In the FY16 PB, the FY15 PB New Start "Minimize C-130 Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)" program has been updated and renamed "C-130H Viability and Airspace Access Program (VAAP) Increment 1", and all FY16 FYDP funds are in the C-130 VAAP Increment 1 mod lines.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force							Date: February 2015		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron		Project (Number/Name) 675244 / C-130 CNS/ATM			
	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
All of PE 41115F FY14 RDT&E funds (\$47.7M--of which \$47.3M is AMP congressional add and \$0.4M is CNS/ATM) are loaded under the C-130 CNS/ATM program, and will be used to the execute the FY16 PB C-130H VAAP Increment 1 mod.									
All FY14 C-130 CNS/ATM program funds were previously on Air Force withhold awaiting further congressional direction on C-130 AMP and the C-130 CNS/ATM program.									

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force	Date: February 2015
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron	Project (Number/Name) 675244 / C-130 CNS/ATM
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone B																												
EMD Contract Awards																												
Design/Integration																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron	Project (Number/Name) 675244 / C-130 CNS/ATM	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B	3	2015	3	2016
EMD Contract Awards	4	2015	4	2016
Design/Integration	3	2015	3	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675248 / C-130 VAAP INCREMENT 1			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675248: C-130 VAAP INCREMENT 1	-	-	-	33.962	-	33.962	58.905	72.849	49.231	2.277	-	217.224
Quantity of RDT&E Articles		-	-	-	-	-	1	2	1	-		

A. Mission Description and Budget Item Justification

In the FY16 PB, the FY15 PB New Start "Minimize C-130 Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)" program has been updated and renamed "C-130H Viability and Airspace Access Program (VAAP) Increment 1".

With the FY13 PB's proposed cancellation of the C-130 Avionics Modernization Program (AMP), the C-130H VAAP Increment 1 program addresses Federal Aviation Administration/International Civil Aviation Organization (FAA/ICAO) CNS/ATM mandates and provides a minimal airspace compliance focused program to modify 172 C-130H aircraft with Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment, 8.33 kHz radios, updated cockpit voice recorder/digital flight data recorders (CVR/DFDR), and Enhanced Mode S.

Note, the Traffic Alert and Collision Avoidance System (TCAS II) is listed in the VAAP Capability Development Document (CDD) as a requirement since it's required for flight operations in airspace controlled by the Federal Aviation Administration (FAA), and airspace controlled by foreign countries; the legacy C-130H fleet currently has TCAS II 7.0 installed.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: C-130H VAAP Increment 1	-	-	33.962	-	33.962
Description: Refine and complete the requirements definition phase of the program, followed by pre integration planning, and the pre Engineering, Manufacturing and Development (EMD) phase.					
FY 2014 Accomplishments: Activities deferred pending Congressional direction on C-130 AMP.					
FY 2015 Plans: Refine and complete the requirements definition phase of the program, followed by integration planning.					
FY 2016 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force								Date: February 2015				
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675248 / C-130 VAAP INCREMENT 1				
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Documentation development, Request for Proposal (RFP) development, and Pre Engineering, Manufacturing and Development (EMD) phase.												
FY 2016 OCO Plans: N/A												
Accomplishments/Planned Programs Subtotals								-	-	33.962	-	33.962
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost	
• C13000 / C-130: C-130 Viability and Airspace Access Program (VAAP) Increment 1	-	-	-	-	-	-	-	51.543	131.976	213.065	425.384	
Remarks												
C-130H VAAP Increment 1 Procurement funding begins in FY19.												
D. Acquisition Strategy												
In the FY16 PB, the C-130 VAAP Increment 1 acquisition strategy changed to perform all upgrades (ADS-B Out, enhanced Mode S, 8.33 kHz radios, and CVR/DVR) as a single umbrella modification, instead of the FY15 PB's three-phase upgrade strategy.												
The updated/renamed 172 aircraft (166x C-130Hs and 6x LC-130Hs) C-130H VAAP Increment 1 program is comprised of H3s, H2.5s, H2s and H1s; and includes 127 Air National Guard, and 45 Air Force Reserve aircraft. The modification effort will have 4 prototype aircraft required for accomplishment of the C-130H VAAP Incr 1 Engineering and Manufacturing Development (EMD) phase, with the remaining 168 being production aircraft. The prototype aircraft represent each type of C-130H configuration listed above.												
The majority of the RDT&E funds are for ADS-B Out: Once integrated, early years primarily involved with defining the program requirements and pre-contract efforts in preparation for the EMD source selection phase. Current schedule reflects the ADS-B Out EMD contract to be awarded, following a competitive source selection, by 1st quarter FY17.												
E. Performance Metrics												
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675248 / C-130 VAAP INCREMENT 1							

Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
EMD Contract	C/TBD	TBD : ,	0.000	-		-		25.962	Oct 2016	-		25.962	Continuing	Continuing	TBD
Trainers/Training	C/TBD	TBD : ,	0.000	-		-		-		-		-	Continuing	Continuing	50.000
Subtotal			0.000	-		-		25.962		-		25.962	-	-	-

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
Development Flight Test	TBD	TBD : ,	0.000	-		-		-		-		-	Continuing	Continuing	12.404
Subtotal			0.000	-		-		-		-		-	-	-	12.404

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
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
PMA - contractor Services	Various	Not Specified : ,	0.000	-		-		6.000	Mar 2016	-		6.000	Continuing	Continuing	6.000
PMA - Gov't Cost	Various	Not Specified : ,	0.000	-		-		2.000	Feb 2016	-		2.000	Continuing	Continuing	10.000
Subtotal			0.000	-		-		8.000		-		8.000	-	-	16.000

			Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	-	-	33.962	-	33.962	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force																Date: February 2015			
Appropriation/Budget Activity 3600 / 7								R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron								Project (Number/Name) 675248 / C-130 VAAP INCREMENT 1			

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone B																												
EMD Contract Awards																												
Design/Integration																												
Preliminary Design Review																												
Critical Design Review																												
Developmental Testing																												
Functional Configuration Audit																												
Milestone C																												
Force Development Evaluation (FDE)																												
Physical Configuration Audit (PCA)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron	Project (Number/Name) 675248 / C-130 VAAP INCREMENT 1	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B	1	2016	1	2017
EMD Contract Awards	1	2017	2	2018
Design/Integration	1	2017	1	2019
Preliminary Design Review	2	2017	3	2017
Critical Design Review	1	2018	2	2018
Developmental Testing	3	2018	2	2019
Functional Configuration Audit	3	2017	1	2019
Milestone C	4	2017	1	2019
Force Development Evaluation (FDE)	3	2017	4	2017
Physical Configuration Audit (PCA)	2	2019	4	2020