

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</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	-	5.749	6.035	4.245	0.000	4.245	6.071	6.185	6.300	6.412	Continuing	Continuing
672888: <i>Distributed Mission Operations Center (DMOC)</i>	-	5.749	6.035	4.245	0.000	4.245	6.071	6.185	6.300	6.412	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Distributed Mission Operations Center (DMOC) provides comprehensive Live, Virtual, and Constructive (LVC) simulation capabilities which prepare warfighters to conduct dominant operations in air, space, cyber, ground, and surface domains in an environment for theater-level, full spectrum combat training for Air Force/joint/coalition partners. This reaches 31 geographically separated LVC locations across 17 time zones representing such assets as real-world weapon systems, operator-in-the-loop, and constructive or computer-driven simulations. It is responsible for development and integration of scenarios, models, and databases and the integration of participating sites into Virtual Flag (VF) training events via numerous network connections, DMOC-developed interoperability tools, and controlled interfaces in support of Air Force, joint, and coalition warfighter readiness. In addition, activities include Distributed Mission Operations (DMO) technology and capability studies/analyses which support both current and future program planning and execution.

The DMOC utilizes RDT&E funding for the following to enhance DMO training:

1. **Distributed Mission Operations Capability/Battlespace Systems Development:** The DMOC upgrades and enhances the capabilities of various systems, tools, and simulators to incorporate ever-changing technology and emerging training requirements into DMO events such as VIRTUAL FLAG (VF), Coalition VF (CVF), etc. to enhance the quality of warfighter training. Activities include: a. Environment Generator development: DMOC is in partnership with the US Naval Air Systems Command (NAVAIR) to enhance the capabilities of the Next Generation Threat System (NGTS). The NGTS is the primary environment generator for both Blue and Red Air in DMOC White Force; b. DMO Tool development: The DMOC Replay Tool facilitates a more complete mission review and debrief capability of the exercises as more sites and systems are added to events. Future DMO Tool development includes enhancement & improvement of the Distributed Interactive Simulation (DIS) Filter; the Tactical Air Datalink Information-J (TADIL-J) Doctor-J (Dr. J) tool to enable tactical datalinks to be communicated and translated between disparate simulator and operationally fielded (i.e. live aircraft) communication formats; and development of Intelligence, Surveillance, and Reconnaissance (ISR)/Battle Damage Assessment (BDA) to improve damage state models used by intelligence analysts in exercises and develops solutions for integrating Contested Degraded Operations (geographical and communications jamming) into DMO events; and c. Simulator Enhancement: Incorporates Mission Package standards upgrades into the Control and Reporting Center Simulation Package (CSP) to allow a real-world system to be used as a simulator when needed in DMO events.
2. **Certification & Accreditation (C&A) and Networthiness:** The DMOC supports requirements definition, integration test support, analysis, systems engineering support, and C&A and Networthiness of core systems. It implements requirements of Cybersecurity and is working toward the application of the Risk Management Framework and Continuous Monitoring. Efforts include Cross-Domain Information Sharing / Multi-national Information Sharing (CDIS/MNIS) ruleset development, load sharing, and testing; accreditation work for various newly developed / updated systems such as the DMOC Replay Tool, Dr. J, DIS Filter, and the DMOC Battlespace.

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
--	----------------------------

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>
--	---

3. Distributed Training Sites & Systems Integration: DMOC integrates distributed training sites and systems into LVC DMO training events; such as, VF and CVF (four-eyes events) by resolving interoperability issues between disparate systems and networks so that all exercise participants can interact in the DMO environment. New sites and systems are incorporated into LVC DMO events each year based on higher headquarters and Combatant Commanders (CCDRs) emerging requirements.

The FY 2017 funding request was reduced by \$1.77 million to account for the availability of prior year execution balances.

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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	5.956	6.035	6.015	0.000	6.015
Current President's Budget	5.749	6.035	4.245	0.000	4.245
Total Adjustments	-0.207	0.000	-1.770	0.000	-1.770
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.207	0.000			
• Other Adjustments	0.000	0.000	-1.770	0.000	-1.770

**Change Summary Explanation**

The FY2017 funding request was reduced by \$1.77 million to account for the availability of prior year execution balances.

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> Distributed Mission Operations (DMO) Capability / Battlespace Systems Development	4.135	4.521	2.872
<b>Description:</b> Simulation software/hardware development in support of users conducting RDT&E, mission rehearsal, and concepts of operation development.			
<b>FY 2015 Accomplishments:</b>			
- Continued Next Generation Threat System (NGTS) development			
-- DMOC/NAVAIR Partnership: Enhanced NGTS source code to implement Air Force DMO requirements			
-- DMOC Initiative: Upgraded the plug-in using NGTS versions 3.1.0-3.1.43.2.0			
- Dr. J. tool enhanced			

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>		<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<ul style="list-style-type: none"> <li>-- Improved Situation Awareness Data Link (SADL) messaging capabilities</li> <li>-- Transitioned to web based user interface</li> <li>-- Enhanced the capability to handle various message package sizes, filtering capability, and support for LVC red/blue datalink networks</li> <li>- Upgraded the CSP software to incorporate Mission Package 14 to meet current Combat Air Forces (CAF) DMO standards</li> <li>- Upgraded elements of the Standard Space Trainer for DMOC-Space (DMOC-S) that enhanced space participation in DMO events</li> </ul> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- Continue NGTS development</li> <li>-- DMOC/NAVAIR Partnership: Enhance NGTS source code to implement Air Force DMO requirements</li> <li>-- DMOC Initiative: Upgrade the plug-in using NGTS versions 3.1.4-3.2.0</li> <li>- ISR/BDA: Enhance system automation and model database to increase training for intel community</li> <li>- DIS Tool Enhancement</li> <li>-- Transition to web based user interface</li> <li>-- Enhancement/improve filtering, routing, and entity management to ensure seamless connectivity between disparate LVC systems</li> <li>- Development LAN: Design a dedicated network to allow design and testing of new/updated systems without impacting operational battlespace</li> <li>- Upgrade capabilities of DMOC-S Global Positioning System Environment to implement features to improve realism of space aspects in DMO events</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Will continue NGTS development</li> <li>-- DMOC/NAVAIR Partnership: By enhancing NGTS source code to implement future Air Force DMO requirements</li> <li>-- DMOC Initiative: Will enhance the plug-in using NGTS versions 3.2.0 as future requirements are identified</li> <li>- Will continue DMO tool development (DIS Tools, DMOC Replay Tool, etc.) as modifications/improvements are identified after completion of DMO events to support changing M&amp;S technology and emerging AF and COCOM requirements</li> <li>- Will continue to update the DMO Simulator as modifications/improvements are identified after completion of DMO events to support changing M&amp;S technology and emerging AF and COCOM requirements</li> <li>- Will continue to support DMOC-S by upgrading systems that incorporate space aspects into DMO events</li> </ul>				
<b>Title:</b> Certification & Accreditation (C&A) and Networkiness		0.482	0.502	0.300

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>		<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>Description:</b> Support requirements definition, integration test support, scenario development, analysis, systems engineering support, and C&amp;A and Networthiness of core systems. Implement requirements of Cybersecurity, Risk Management Framework, and Continuous Monitoring.</p> <p><b>FY 2015 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>- Completed C&amp;A activities to re-accredit NGTS, Dr. J. CSP, and other battlespace systems</li> <li>- Supported CVF with Cross-Domain Information Sharing/Multi-national Information Sharing (CDIS/MNIS) ruleset development, load sharing, and testing</li> </ul> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- Perform C&amp;A activities to re-accredit DMO Tools, systems, and battlespace modifications after upgrades are completed</li> <li>- Support CVF with CDIS/MNIS ruleset development, load sharing, and testing based on FY16 requirements</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Will perform C&amp;A activities to re-accredit DMO Tools, systems, and battlespace modifications</li> <li>- Will continue to support CVF with CDIS/MNIS ruleset development, load sharing, and testing</li> </ul>				
<p><b>Title:</b> Distributed Training Sites &amp; Systems Integration</p> <p><b>Description:</b> Establish distributed training site system integration and interoperability between DMOC, operational units, and modeling &amp; simulation facilities.</p> <p><b>FY 2015 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>- RED FLAG (RF)/Virtual Flags (VF)/Coalition Virtual Flag (CVF) Integration</li> <li>-- Integrated live Nevada Test and Training Range (NTTR) vehicle and aircraft position, orientation, vector, speed, and identification data to enhance operational and tactical Command and Control (C2) ISR training</li> <li>-- Integrated DMOC-S Space Based Infrared System (SBIRS) virtual reporting of Integrated Air &amp; Missile Defense (IAMD) threats to operational C2</li> <li>-- Integrated live and virtual US Army Patriot systems for inter-theater air defense</li> <li>- Integrated numerous other sites/systems based on higher headquarters/COCOM requirements</li> </ul> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- RF/VFs/CVF Integration</li> <li>-- Incorporate UHF voice transmission capability to integrate LVC systems</li> <li>-- Add capability to integrate high fidelity live NTTR threat systems data to support virtual ISR training</li> <li>-- Add virtual ISR capabilities to augment live NTTR training</li> </ul>		1.132	1.012	1.073

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
--	----------------------------

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>
--	---

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017
<ul style="list-style-type: none"> <li>- Explore options for integration of 5th Gen fighters and advanced systems into FY16 VFs/CVF</li> <li>- Support higher headquarters /COCOM emerging requirements</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Will continue the development of LVC concepts in support of RF/VFs/CVF integration</li> <li>- Will continue 5th Gen and future Distributed Mission Operations Network (DMON) infrastructure integration</li> <li>- Will support/leverage/collaborate DMOC efforts to establishment the Virtual Warfare Center-Nellis, to enable a high end testing and tactics development capability</li> <li>- Will support emerging higher headquarters/COCOM requirements</li> </ul>			
<b>Accomplishments/Planned Programs Subtotals</b>	5.749	6.035	4.245

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**E. Acquisition Strategy**

The Distributed Mission Operations Center (DMOC) supports AF/Joint/Coalition DMO and the Joint National Training Capability (JNTC) through the development and integration of DMO training and test events, networks, scenarios, and databases. Due to evolving modeling & simulation technology, the DMOC is an on-going, evolutionary effort to keep pace with those changes by continuously developing/upgrading DMO environment generators, systems, and tools and ensuring integration/ interoperability of new systems into DMO to provide the best warfighter training possible.

DMOC has two primary contracts that manage the acquisition, development, testing, and integration of DMO standards, training, modeling and simulation, cross-domain information sharing testbed, and exercises on AF/Joint/Coalition DMO networks.

Infrastructure, Development, and Engineering (IDE) Contract: Develops / upgrades various DMOC tools, systems and simulators that are needed to conduct DMO training events. Develops, implements, and tests technical solutions for the integration of sites/systems into VF, CVF, and other DMO events. The IDE contract is cost-plus-fixed-fee with multiple task orders awarded for individual projects over the course of the fiscal year.

Command and Control Technical Support Contract (C2TSC): Supports government by assisting with development of technical requirements for upgrades to various systems and tools that will be developed by the IDE contractor and then performs acceptance testing of the those products. Develops requirements for site/system integration of sites/systems into VF, CVF, and other DMO events. C2TSC is a firm-fixed-price contract that is incrementally funded over the course of the fiscal year.

**UNCLASSIFIED**

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

**Appropriation/Budget Activity**  
3600: *Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development*

**R-1 Program Element (Number/Name)**  
PE 0207605F / *Wargaming and Simulation Centers*

**F. 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.

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 0207605F / Wargaming and Simulation Centers				672888 / Distributed Mission Operations Center (DMOC)							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Distributed Mission Operations (DMO) Capability / Battlespace Systems Development, Certification & Accreditation (C&A) and Networkiness, and Distributed Training Sites & Systems Integration	C/CPFF	Lockheed Martin : Kirtland AFB, NM	-	2.524	Mar 2015	2.568	Mar 2016	0.000		0.000		0.000	Continuing	Continuing	94.000
Follow-on Distributed Mission Operations (DMO) Capability / Battlespace Systems Development, Certification & Accreditation (C&A) and Networkiness, and Distributed Training Sites & Systems Integration	C/FFP	TBD : Kirtland AFB, NM	-	0.000		0.000		2.751	Jan 2017	0.000		2.751	Continuing	Continuing	75.000
<b>Subtotal</b>			-	2.524		2.568		2.751		0.000		2.751	-	-	169.000
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Technical requirements development, integration/ acceptance testing, and engineering support	C/FFP	Alpha-Omega Change Engineering, Inc. : Kirtland AFB, NM	-	1.745	Sep 2015	1.713	Sep 2016	0.738	Sep 2017	0.000		0.738	Continuing	Continuing	30.000
<b>Subtotal</b>			-	1.745		1.713		0.738		0.000		0.738	-	-	30.000



**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>	<b>Project (Number/Name)</b> 672888 / <i>Distributed Mission Operations Center (DMOC)</i>

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
DMO Capability / Battlespace Systems Development (Design)																												
DMO Capability / Battlespace Systems Development (Development)																												
DMO Capability / Battlespace Systems Development (Integration/Test)																												
Certification & Accreditation (C&A) and Networthiness (Concept Activities)																												
Certification & Accreditation (C&A) and Networthiness (Design)																												
Certification & Accreditation (C&A) and Networthiness (Development)																												
Distributed Training Sites & Systems Integration (Design)																												
Distributed Training Sites & Systems Integration (Development)																												
Distributed Training Sites & Systems Integration (Integration/Test)																												
Virtual Flag 15-1 (VF 15-1) (Feb 2015)																												
VF 15-2 (Mar 2015)																												
VF 15-3 (May 2015)																												
Coalition Virtual Flag 15-4 (CVF 15-4) (Aug 2015)																												
VF 16-1 (Dec 2015)																												
VF 16-2 (Mar 2016)																												
VF 16-3 (May 2016)																												
CVF 16-4 (Aug 2016)																												

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / Wargaming and Simulation Centers	<b>Project (Number/Name)</b> 672888 / Distributed Mission Operations Center (DMOC)
--	--	---

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
VF 17-1 (Dec 2016)								■																				
VF 17-2 (Mar 2017)									■																			
VF 17-3 (May 2017)										■																		
CVF 17-4 (Aug 2017)											■																	
VF 18-1 (Dec 2017)												■																
VF 18-2 (Mar 2018)													■															
VF 18-3 (May 2018)														■														
CVF 18-4 (Aug 2018)															■													
VF 19-1 (Dec 2018)																■												
VF 19-2 (Mar 2019)																	■											
VF 19-3 (May 2019)																		■										
CVF 19-4 (Aug 2019)																			■									
VF 20-1 (Dec 2019)																				■								
VF 20-2 (Mar 2020)																					■							
VF 20-3 (May 2020)																						■						
CVF 20-4 (Aug 2020)																							■					
VF 21-1 (Dec 2020)																								■				
VF 21-2 (Mar 2021)																									■			
VF 21-3 (Mar 2021)																										■		
CVF 21-4 (May 2021)																											■	

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>	<b>Project (Number/Name)</b> 672888 / <i>Distributed Mission Operations Center (DMOC)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DMO Capability / Battlespace Systems Development (Design)	1	2015	4	2021
DMO Capability / Battlespace Systems Development (Development)	2	2015	4	2021
DMO Capability / Battlespace Systems Development (Integration/Test)	3	2015	4	2021
Certification & Accreditation (C&A) and Networthiness (Concept Activities)	1	2015	4	2021
Certification & Accreditation (C&A) and Networthiness (Design)	2	2015	4	2021
Certification & Accreditation (C&A) and Networthiness (Development)	3	2015	4	2021
Distributed Training Sites & Systems Integration (Design)	2	2015	4	2021
Distributed Training Sites & Systems Integration (Development)	3	2015	4	2021
Distributed Training Sites & Systems Integration (Integration/Test)	4	2015	4	2021
Virtual Flag 15-1 (VF 15-1) (Feb 2015)	2	2015	2	2015
VF 15-2 (Mar 2015)	2	2015	2	2015
VF 15-3 (May 2015)	3	2015	3	2015
Coalition Virtual Flag 15-4 (CVF 15-4) (Aug 2015)	4	2015	4	2015
VF 16-1 (Dec 2015)	1	2016	1	2016
VF 16-2 (Mar 2016)	2	2016	2	2016
VF 16-3 (May 2016)	3	2016	3	2016
CVF 16-4 (Aug 2016)	4	2016	4	2016
VF 17-1 (Dec 2016)	1	2017	1	2017
VF 17-2 (Mar 2017)	2	2017	2	2017
VF 17-3 (May 2017)	3	2017	3	2017
CVF 17-4 (Aug 2017)	4	2017	4	2017
VF 18-1 (Dec 2017)	1	2018	1	2018

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207605F / <i>Wargaming and Simulation Centers</i>	<b>Project (Number/Name)</b> 672888 / <i>Distributed Mission Operations Center (DMOC)</i>
--	---	--

Events	Start		End	
	Quarter	Year	Quarter	Year
VF 18-2 (Mar 2018)	2	2018	2	2018
VF 18-3 (May 2018)	3	2018	3	2018
CVF 18-4 (Aug 2018)	4	2018	4	2018
VF 19-1 (Dec 2018)	1	2019	1	2019
VF 19-2 (Mar 2019)	2	2019	2	2019
VF 19-3 (May 2019)	3	2019	3	2019
CVF 19-4 (Aug 2019)	4	2019	4	2019
VF 20-1 (Dec 2019)	1	2020	1	2020
VF 20-2 (Mar 2020)	2	2020	2	2020
VF 20-3 (May 2020)	3	2020	3	2020
CVF 20-4 (Aug 2020)	4	2020	4	2020
VF 21-1 (Dec 2020)	1	2021	1	2021
VF 21-2 (Mar 2021)	2	2021	2	2021
VF 21-3 (Mar 2021)	3	2021	3	2021
CVF 21-4 (May 2021)	4	2021	4	2021