Project Data Summary Sheet[229]

Project Number	**AIR 5402**
Project Name	**AIR TO AIR REFUELLING CAPABILITY**
First Year Reported in the MPR	2008-09
Capability Type	New
Acquisition Type	Developmental
Service	Royal Australian Air Force
Government 1st Pass Approval	N/A
Government 2nd Pass Approval	May 03
Total Approved Budget (Current)	**$1,822.3m**
2014-15 Budget	**$107.4m**
Project Stage	**Initial Materiel Release**
Complexity	ACAT II

Section 1 – Project Summary

1.1 Project Description

This project **has provided** the Australian Defence Force (ADF) with five new generation Airbus A330 Multi Role Tanker Transport aircraft (MRTT), to be known as the KC-30A in Royal Australian Air Force (RAAF) service. The MRTT will be equipped with both hose and drogue and boom refuelling systems capable of in-flight refuelling of current and future aircraft, including F/A-18 Classic and Super Hornets, Hawk Lead-In Fighter, Wedgetail Airborne Early Warning and Control, C-17 Globemaster III, and Joint Strike Fighter (JSF). The MRTT will also provide significant Air Logistics Services capability for carriage of up to 270 passengers and cargo. The acquisition also establishes the infrastructure necessary to deliver services including engineering, maintenance, spares management, technical data, software and training support for the new fleet.

1.2 Current Status

On 15 October 2010, the then Minister for Defence Materiel announced this project is a Project of Concern.

On advice that all remediation activities identified in the Project of Concern remediation plan have been resolved, on 25 February 2015 the Minister for Defence agreed to remove Project AIR 5402 from the Project of Concern list.

Cost Performance

In-year

The $3.6m variance is attributable to a reduction in spend against Overseas Industry contracts ($10.4m), a reduction in salaries payments ($3.7m), an undisclosed amount to recognise assets received as Liquidated Damages, a ($0.1m) reduction in FMS payments, a $6.4m increase in spend for Heavy AirLift Systems Program Office (HALSPO) spares and the modification program and FOREX which contribute to the remaining variation.

229 Notice to reader

Future dates and Sections: 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability Delivery Performance), 5.1 (Major Project Risks) and 5.2 (Major Project Issues) are out of scope for the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Review Report by the Auditor-General* in **Part 3** of this report.

Project Financial Assurance Statement

As at 30 June 2015, project AIR 5402 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The project has applied contingency **in the financial year primarily for the treatment of risks associated with the modification program and spares required by the project.**

Schedule Performance

Concurrent with acceptance of the first aircraft, DMO and Airbus Defence and Space agreed the principles of a commercial settlement which, amongst other things, included a plan for remediation of all non-conformances, a program of improvements to the Aerial Refuelling Boom System (ARBS) and a re-baseline of the Contract Milestone Dates. The commercial settlement was signed concurrently with acceptance of the third aircraft (A39-004) in November 2011.

The prototype aircraft (MRTT#1) was accepted on 29 December 2011 following refurbishment to remove the extensive suite of flight test instrumentation, repair structural damage, install retrofit modifications, and to complete the interior fit out. In accordance with the commercial settlement, MRTT#1 was handed back to Airbus Defence and Space for use during 2012 for testing of modifications to the military avionics and boom refuelling systems.

Commencement of qualification flight testing was delayed due to additional inspections and repairs to MRTT#1 to correct quality and maintenance deficiencies. Flight testing of the military avionics was completed in October 2012, with ongoing technical investigation of two functions**.**

Certification of modifications to the boom refuelling system was further delayed due to completion of investigation into the in-flight loss of boom incident in September 2012 on a United Arab Emirates Air Force aircraft being operated by Airbus Defence and Space. Certification (safety) flight testing was completed February 2013.

Qualification (contract compliance) flight testing commenced in March 2013 but was unable to be completed prior to induction of the test aircraft into heavy maintenance in July 2013 due to a number of test anomalies.

Flight test resumed in November 2013 with certification and qualification flight test to be conducted through 2014. Completion of boom testing is planned for July 2014.

Interim Acceptance of the Simulation Devices was achieved in March 2013 following completion of formal accreditation testing**.** The first pilot and Aerial Refuelling Operator conversions using the Simulation Devices were completed in December 2012.

The fifth and final KC-30A aircraft was accepted from Airbus Defence and Space in Madrid in November 2012 and ferried to Australia by a RAAF crew.

Deed of Settlement, Release and Amendment 4 was reached with Airbus Defence and Space on 18 June 2014 to rebaseline the contract, complete the development and testing of the ARBS and to further enhance the aircraft and simulation devices.

The ARBS Qualification flight test program was successfully completed in July 2014 with Contractual acceptance of the ARBS achieved in December 2014. In February 2015 MRTT#1 was ferried to Australia by a crew from Airbus Defence and Space. This means, all five aircraft are now with RAAF.

FMR is currently forecast for May 2016, 39 months behind the original planned date.

Materiel Capability Delivery Performance

To meet Defence strategic goals, the project has worked closely with Airbus Defence and Space to ensure that the initial configuration at acceptance provides essential capability for Air Logistics Support (passengers and cargo) and pods (hose and drogue) air to air refuelling. A suitable framework to enable contractual acceptance of aircraft with non-critical non-conformances has been established. This framework also ensures that full compliance will be achieved by Final Materiel Release (FMR) in order to achieve Final Operational Capability (FOC). All issues identified to date have suitable processes and procedures in place to reduce the operational impact. The non-conformances are being carefully managed to meet minimum requirements of Initial Materiel Release (IMR) and Initial Operational Capability (IOC), noting that IOC was declared in February 2013, and IMR in May 2014.

Non-conformances to the contracted capability include issues with radio management, military avionics, mission planning and the lack of an acceptable boom refuelling system.

Although the aircraft has been certified (with limitations) for boom refuelling of small and large aircraft, an agreement has also been reached on improvements to the ARBS to provide an effective operational capability**.**

The ARBS Qualification flight test program was successfully completed in July 2014 with Contractual acceptance of the ARBS achieved in December 2014 as per the exit criteria for milestone 26A (Boom Acceptance).

While delivery of an operational boom refuelling system has been significantly delayed, the capability impact is not considered significant provided FOC can be achieved prior to the JSF aircraft entering RAAF service.

The United States has also provided approval for the Electronic Warfare Self Protection system to be installed and tested (safety of flight and airworthiness only) in Australia, which will be completed by FOC.

Note

The capability assessments and forecasts by the project are not subject to the ANAO's assurance review.

1.3 Project Context

Background

Government gave the equivalent of second pass approval in May 2003 for a new generation air to air refuelling capability.

An open Request for Tender was released in June 2003 for both the Acquisition and Through Life Support (TLS) Contracts. In April 2004, Government announced that the Military Transport Aircraft Division of the European Aeronautic and Space Company Construcciones Aeronauticas S.A. (EADS CASA), teamed with Qantas Defence Services, had been selected as the preferred tenderer for the supply of five Airbus A330 MRTT aircraft and their associated support.

The Acquisition Contract was signed with Spanish company EADS CASA in December 2004. The TLS Contract was signed with Qantas Airways Limited in February 2007.

In April 2009, the Military Transport Aircraft Division of EADS was amalgamated with the Airbus Military Division, and commenced trading as Airbus Military. In February 2014, Airbus Military was rebranded and commenced trading as Airbus Defence and Space.

The A330 MRTT is based on the Airbus A330-200 medium/long-range twin aisle commercial aircraft. The first (prototype) aircraft was modified and tested by Airbus Defence and Space in Madrid, Spain. The remaining four aircraft were modified by Qantas, under subcontract to Airbus Defence and Space, at the Australian Conversion Centre, located at Brisbane Airport, Australia.

A Contract Change Proposal (CCP) was signed in March 2006 for the procurement of a Full Flight Mission Simulator, Integrated Procedures Trainer and a Simulator Training Facility.

Another CCP was signed in December 2006 for changes to the cockpit layout to accommodate redesign of the refuelling operator console and associated changes to the cockpit access door and forward lavatory. Implementation of these changes on the first aircraft required the conversion and test activities to be divided into two phases:

- Phase 1 involved the structural modification of the aircraft, including installation of boom and pods for civil certification.
- Phase 2 involved the installation of the military systems, installation of the refuelling operator console and completion of cabin modifications for full military certification and qualification of the modified aircraft.

Uniqueness

AIR 5402 is the lead customer of the A330 MRTT platform, including the lead customer for the Airbus Defence and Space developed ARBS. Whilst Airbus Defence and Space has previously developed and delivered underwing pod equipped A310 MRTT aircraft to the German and Canadian Air Forces, the A330 MRTT is a significantly more complex developmental effort to design, build and test the first of type, highly integrated military mission and refuelling systems. In parallel, Airbus Defence and Space is required to develop the publications, training devices and training material to support introductory training of aircrew and maintenance staff and for transition to the TLS Contractors for ongoing support of the new tanker capability. Subsequent sales to Saudi Arabia, United Kingdom, United Arab Emirates and Singapore have bolstered the Airbus Defence and Space commitment to the program and helped amortise development costs.

Major Risks and Issues

All of the project's major risks and issues have been retired or downgraded to below high/extreme.

Other Current Sub-Projects

Project AIR 7403 Phase 3 for the purchase of two A330 aircraft and conversion to MRTT aircraft, was implemented in June 2015 through a CCP to the current contract.

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	$m		Notes
	Project Budget			
May 03	Original Approved		2,076.6	
Jun 04	Real Variation – Budgetary Adjustment	(149.4)		1
Aug 04	Real Variation – Budgetary Adjustment	(1.2)		2
Aug 05	Real Variation – Budgetary Adjustment	(3.0)		3
Nov 05	Real Variation – Transfer	(135.5)		4
			(289.1)	
Jul 10	Price Indexation		484.1	5
Jun 15	Exchange Variation		**(449.3)**	
Jun 15	**Total Budget**		**1,822.3**	
	Project Expenditure			
Prior to Jul 14	Contract Expenditure – Airbus Defence and Space	**(1,464.0)**		
	Other Contract Payments / Internal Expenses	**(124.0)**		6
			(1,588.0)	
FY to Jun 15	Contract Expenditure – Airbus Defence and Space	**(62.0)**		
	Contract Expenditure – Northrop Grumman Integrated Defence Services	**(6.8)**		**7**
	Other Contract Payments / Internal Expenses	**(35.0)**		**8**
			(103.8)	
Jun 15	**Total Expenditure**		**(1,691.8)**	
Jun 15	**Remaining Budget**		**130.5**	

Notes	
1	Defence Capability direction regarding currency mix at approval and Government decisions.
2	Administrative Savings harvest.
3	Skilling Australia's Defence Industry harvest.
4	Transfer to Defence Support and Reform Group for delivery of MRTT infrastructure at RAAF Amberley and at other RAAF bases.
5	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was $473.9m. In addition to this amount, the impact on the project budget as a result of out-turning was a further $10.2m having been applied to the remaining life of the project.
6	Other expenditure comprises: operating expenditure, contractors, consultants, contingency, other capital expenditure not attributable to the aforementioned prime contract and minor contract expenditure. The major component of this amount is for Tanker Hire costs ($26.4m) incurred in Financial Year 2009-10, associated with the delay to the program.
7	**The Northrop Grumman Integrated Defence Services contract covers work under the modification program to upgrade three aircraft to the final configuration via a Through Life Support contract.**

8	Other expenditure comprises: operating expenditure, contractors, consultants, contingency, other capital expenditure not attributable to the aforementioned prime contract and minor contract expenditure. **This amount includes $6.7m for spares, $4.3m for engineering support, $1.5m for purchase of aircraft loaders, $0.6m for project office costs, $21.9m for Additional Work Tasking Orders, non cash LD expense, and other miscellaneous orders.**

2.2A In-year Budget Estimate Variance

Estimate PBS $m	Estimate PAES $m	Estimate Final Plan $m	Explanation of Material Movements
141.9	**103.7**	**107.4**	**The variation between PBS and PAES estimates is primarily due to prime contract milestone slipping from 2014-15 to 2015-16; cost savings associated with contract changes; spares no longer required; as well as the delay in the delivery of spares. Variance between PAES and Final Plan estimates is due to exchange rate variations.**
Variance $m	**(38.2)**	**3.7**	Total Variance ($m): **(34.5)**
Variance %	**(26.9)**	**3.6**	Total Variance (%): **(24.3)**

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan $m	Actual $m	Variance $m	Variance Factor	Explanation
		(0.1)	FMS	**The $3.6m variance is attributable to a reduction in spend against Overseas Industry contracts ($10.4m), a reduction in salaries payments ($3.7m), an undisclosed amount to recognise assets received as LDs, a ($0.1m) reduction in FMS payments, a $6.4m increase in spend for HALSPO spares and the modification program and FOREX which contribute to the remaining variation.**
		(10.4)	Overseas Industry	
		6.4	Local Industry	
		5.6	Brought Forward	
			Cost Savings	
		(5.1)	FOREX Variation	
			Commonwealth Delays	
			Additional Government Approvals	
107.4	**103.8**	**(3.6)**	**Total Variance**	
		(3.3)	**% Variance**	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature $m	30 Jun 15 $m			
Airbus Defence and Space formerly Airbus Military	Dec 04	1,413.4	**1,573.0**	Variable	ASDEFCON	1,**2**
Northrop Grumman Integrated Defence Services	**Jan 15**	**15.0**	**15.0**	**Fixed**	**ASDEFCON**	1,**3**

Notes

1	Contract value as at 30 June 2015 is based on actual expenditure to 30 June 2015 and remaining commitment at current exchange rates, and includes adjustment for indexation (where applicable).
2	The increase in contract value is due primarily to a number of major CCPs including CCP-001 Simulator, CCP-074 Support and Test Equipment, CCP-078 Spares, CCP-053 Flight Management System, CCP-060 Training Course Development and CCP-102 Boom Enhancements.
3	**The contract price includes a provision for direct materiel purchases and additional labour.**

Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 15		
Airbus Defence and Space formerly Airbus Military	5	5	Provision of a new generation air to air refuelling capability comprising five A330 MRTT aircraft and associated supplies and support.	**1**
Northrop Grumman Integrated Defence Services	**3**	**3**	**Modification to upgrade three aircraft to the final configuration.**	

Notes

1	**CCP 131 - purchase of two A330 aircraft and CCP 132 - conversion to MRTT aircraft, raised and signed to update the existing acquisition contract with Airbus Defence and Space for the two aircraft and associated conversion at a cost of AUD $408m. This acquisition will be managed under Project Air 7403 Phase 3.**

Major equipment received and quantities to 30 Jun 15

Acceptance of the third aircraft (A39-004) was achieved on 7 November 2011. The fourth aircraft accepted (MRTT#1) by the Commonwealth was achieved on 29 December 2011 but retained in Madrid under Airbus Defence and Space care, custody and control during 2012 to 2014 to be used for testing of modifications to the military avionics and boom refuelling systems, with acceptance of the fifth aircraft (A39-005) achieved on 30 November 2012**. Technical acceptance of MRTT#1, the first aircraft modified with the final boom configuration was achieved on 14 April 2015.**

Initial Acceptance of the Simulation Devices (Full Mission Simulator, Part Task Trainer and Integrated Procedures Trainer) and Facility was achieved on 28 December 2011.

Acceptance of additional deliveries of spares and support and test equipment **continue to be achieved.**

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Requirements /Design	MRTT Aircraft	Feb 05	Feb 05	Mar 05	1	
System Requirements	Simulation Devices	May 06	May 06	Oct 06	5	
Preliminary Design	MRTT Aircraft	Jun 05	Jun 05	Jun 05	0	
	Simulation Devices	Sep 06	Sep 06	Jun 07	9	
	Simulation Devices Facility	Sep 06	May 07	Jul 07	10	
Critical Design	MRTT Aircraft	Feb 06	Mar 06	Jun 06	4	1
	Simulation Devices	Mar 07	Jan 08	Jan 09	22	2
	Simulation Devices Facility	Apr 07	Nov 07	Jan 09	21	3
	Aerial Refuelling Boom System	Sep 11	Sep 11	Dec 11	3	4
Final Design	MRTT Aircraft	Sep 06	Sep 06	Jul 07	10	1
	Aerial Refuelling Boom System	Dec 11	Dec 11	Jul 12	7	4

Notes

1	The MRTT Aircraft Critical Design Review (CDR) was conducted over a series of meetings from February to May 2006. Although design for the majority of the aircraft systems had been satisfactorily completed, the design for key elements of the aircraft mission system was not yet mature. “Practical

	Completion" of the CDR Milestone was achieved in June 2006; with a follow-on milestone designated as the Final Design Review (FDR). Concurrently, evaluations of the new Remote Aerial Refuelling Operator console identified the need for changes to the cockpit layout. These changes were agreed as part of the CDR close-out and required a change to the conversion and test process, which was split into two phases: Phase 1 for structural conversion and civil certification, and Phase 2 for installation of the military avionics and military certification. Closure of the residual activities to achieve the FDR proved problematic. These were progressively completed over the following 12 months.
2	Delays to completion of the MRTT Aircraft design process had a knock-on impact to completion of the Simulation Devices CDR.
3	Completion of the CDR for the Simulation Devices Facility was delayed due to redesign to accommodate increased security requirements.
4	Additional design review milestones were added for development of improvements to the ARBS. As with previous design reviews, closure of the contract milestone has lagged conduct of the design review activity in order to complete approval of documentation in accordance with the milestone exit criteria.

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Integration	MRTT Aircraft	Aug 08	Dec 08	May 11	33	1
	Simulation Devices	Feb 09	Dec 09	Apr 11	26	2
Acceptance	MRTT Aircraft – Milestone 18 - Acceptance of First Aircraft	Dec 08	Oct 10	Jun 11	29	1
	Simulation Devices and Simulation Devices Facility	May 09	Dec 11	Dec 11	31	2
	Full Mission Simulator Final Accreditation	Feb 10	Feb 14	**Jul 15**	**65**	2
	Aerial Refuelling Boom System	Dec 12	Dec 12	**Dec 14**	**24**	3
	Contract Final Acceptance	Feb 11	**Jul 15**	**Oct 15**	**56**	4

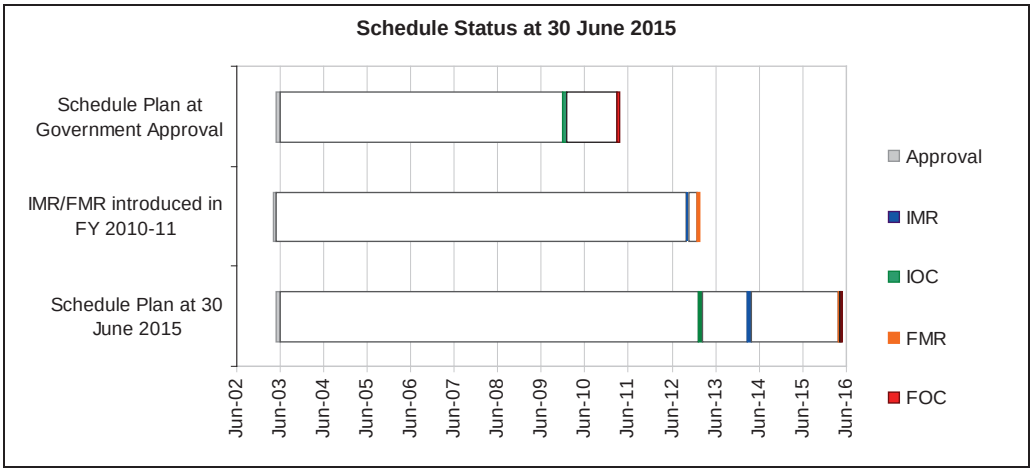
Notes	
1	Originally planned as a single-phase activity, the system integration test program for the first-of-type A330 MRTT was split into two phases to accommodate changes to the Remote Aerial Refuelling Operator console. The first phase, for civil certification of the modified aircraft, was successfully completed in February 2008. The second phase, for military certification and qualification of the modified aircraft, commenced end of December 2008, approximately six months late due to the combination of delays to the first and second conversion phases. Unexpected and continued delays experienced in the development test phase during 2009 delayed commencement of the formal certification ground and flight testing program. A Technical Certificate for certification of the A330 MRTT was issued by the Spanish military certification authority Instituto Nacional de Tecnica Aerospacial (INTA) in October 2010 and reissued in April 2011 to certify changes introduced following a serious in-flight incident and loss of the boom in January 2011 during a training flight with Portuguese F-16 fighters. Qualification testing was completed in December 2010; although two additional flights were necessary, and completed in May 2011, to complete test evidence necessary to demonstrate compliance with the contract specification. Acceptance Test and Evaluation of the first MRTT Aircraft (MRTT#3) was conducted during May 2011 as part of the Customer Acceptance Process following completion of all system integration testing and aircraft preparation for delivery.

2	Delays to completion of the MRTT Aircraft test process has a knock-on impact to completion of testing of the Simulation Devices as the data required for its final accreditation is dependent on a targeted flight test phase conducted at the end of the formal test program. The Simulation Devices were introduced in phased manner to recover schedule due to delays in the aircraft test program, enabling initial acceptance to be completed in 2011 and training to commence on the devices in 2012. Final accreditation was delayed due to the need for development and testing of further improvements to meet full capability and flow-through of changes to the Simulation Devices.
3	The ARBS program was delayed due to continued development of the ARBS. The Milestone schedule was rebaselined at Deed 4 to allow for further testing.
4	Rectification of all non-conformances at initial acceptance and provision of service bulletins for upgrade of delivered aircraft is required to be completed by Contract Final Acceptance. **Delivery of some final parts and data is expected to impact the Contract Final Acceptance date.**

3.3 Progress Toward Materiel Release and Operational Capability Milestones

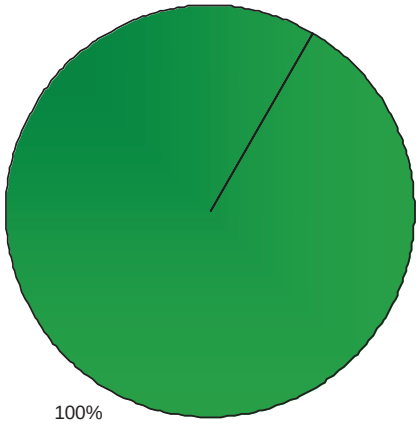
Item	Original Planned	Achieved /Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct 12	May 14	19	1, 5
Initial Operational Capability (IOC)	Dec 09	Feb 13	38	2
Final Materiel Release (FMR)	Feb 13	**May 16**	**39**	3, 5
Final Operational Capability (FOC)	Mar 11	**May 16**	**62**	4

Notes	
1	DMO milestone for delivery and acceptance of two aircraft, and issue of a Special Flight Permit (SFP) for Air Logistics Support and air to air refuelling for pod refuelling only in support of an IOC. Although IOC achievement has been declared, a declaration of IMR was delayed pending approval of the IMR report.
2	IOC required demonstration of an effective capability for Air Logistics Services (passengers and cargo) and pods (hose and drogue) air to air refuelling. Variance from the original planned date was due to delays to the development, certification and qualification of the first-of-type aircraft and refinement of planning and identification of additional training and operational test and evaluation requirements. Delays to Acceptance of the first aircraft required alternative arrangements for provision of aerial refuelling and air logistics services to meet Air Force operational and training commitments.
3	DMO milestone for delivery and acceptance of five aircraft and mature support system, including training devices, training materials, publications, spares and support and test equipment.
4	**Completion of the KC-30A fleet modification program will be delayed due to a combination of impacts from supporting operations and contractor performance. Scheduling of the Airworthiness Board for Service Release of the Boom Capability in March 2016 will impact achievement of FOC, albeit operations will be conducted under the boom SFP and the impacts are therefore minor.**
5	In 2004, Government approved the IOC and FOC Original Planned dates. In 2010 Defence introduced the IMR and FMR milestones. The Original Planned dates for IMR and FMR were aligned with the then Forecast dates for IOC and FOC.



Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
	**Green:** Introduction into Service of the KC-30A capability was impacted by first-of-type performance and reliability problems with the refuelling pods and delays to implementation of the interim mission planning systems. Notwithstanding, the project has delivered the materiel capability requirements for IMR and IOC including but not limited to: • Safely and effectively refuelling aircraft equipped with pod hose and drogue compatible refuelling systems; • Ability to accept military and civil pallets and bulk cargo; • Suitable military and civil communication and navigation suites; • **Acceptance of boom and MPS capability;** and • Aircraft and TLS system capable of sustaining initial prescribed annual rate of effort. **Amber:** **N/A** **Red:** N/A
Note	
This Pie Chart does not necessarily represent capability achieved. The capability assessments and forecasts by the project are not subject to the ANAO's assurance review.	

4.2 Constitution of Initial Materiel Release and Final Materiel Release

Item	Explanation	Achievement
Initial Materiel Release (IMR)	**IMR constitutes the acceptance of two MRTT aircraft and SFP for Air Logistics Services and AAR (pods only). IMR was declared in May 2014.**	**Achieved**
Final Materiel Release (FMR)	**FMR constitutes the acceptance of five MRTT aircraft with KC-30A type capable of achieving all Measure of Effectiveness requirements, acceptance of Simulation Devices, and Australian Military Type Certificate (AMTC) and Service Release (SR) achievement.** **FMR is predicted for May 2016 linked to completion of the aircraft modification program and Service Release of the Boom Capability.**	**Not achieved**

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
Refuelling system technical, integration or performance envelope issues impacting achievement of Milestone 26A (redelivery of the last MRTT aircraft).	Actively monitor system design, development and testing and enforce performance goals. At the acceptance of the first aircraft non-compliances were documented, with rectification action and schedule agreed. Project continues to closely monitor contractor progress for the development, testing and delivery of the rectifications. Select RPT positions in Madrid have been extended to maintain close oversight of contractor activities, and also participation in design reviews, testing, and acceptance activities. Additional Commonwealth resources have also been transferred to Madrid to support the ARBS program. United States Air Force (USAF) support is being maintained to provide the CoA with boom refuelling expert knowledge and test support. **This risk has been retired due to the contractual acceptance of Milestone 26A (ARBS) achieved in December 2014.**
Final Design and implementation of Human Machine Interface of systems is not fully effective impacting efficient and safe operation of the aircraft.	Continue to contribute to the Human Engineering Program to provide timely feedback. Actively manage and control Human Machine Interface (HMI) development with Subject Matter Experts to ensure contracted requirements are met. HMI deficiencies at initial acceptance were identified and a remediation plan agreed. Defence Science and Technology Organisation subject matter expert has re-engaged with the project to provide ongoing HMI expertise support. **This risk has been retired due to the completion of the HMI program.**
Lack of operational testing and engineering experience by key stakeholders impacting the design and certification of the final product.	Secure expert support from RAAF and USAF for review of design and testing. Highlight possible short comings to authorities and provide expert oversight of certification process. Involvement of USAF boomers in certification and qualification activities and the introduction of a Commonwealth contracted expert. Airbus Defence and Space engagement of additional boom refuelling

	expertise. **This risk has been retired due to contractual acceptance of Milestone 26A (ARBS) achieved in December 2014.**
Final delivery of a sub-optimal Mission Planning System (MPS) impacting final capability.	Clarification and agreement on a finite set of requirements with Airbus Defence and Space. Also liaise with other customers to maintain a common set of requirements across the customer base to assist with maintaining a common configuration. MPS non-compliances for aircraft acceptance have been documented and agreed with a remediation plan for the final capability. The impact of delays to the delivery of the final MPS capability has been mitigated by the availability of an interim MPS suite of applications and other workarounds. The project continues to closely monitor contractor activities for the development, testing and acceptance of the final MPS capability. **This risk has been retired due to the contractual acceptance of Milestone 26F (MPS v6.3) achieved in December 2014.**
In-service technical issues will complicate rectification of acquisition non-compliances due to new problems being identified.	The in-service TLS organisations are monitoring technical problems through the use of defect reports, with defect report summaries provided to the project office. Airbus Defence and Space have provided a holistic consideration of the system problems and ensure acquisition design changes are aware of any impacts. A combined acquisition and TLS Configuration Control Board will be operated until AMTC and SR is granted. Project Management Reviews with the contractor under the acquisition program will consider this issue and ensure coordination over both the acquisition and TLS programs. **This risk has been retired due to the maturity of the management of the non conformances and issue of AMTC / SR for KC-30A and SFP for Aerial Refuelling Boom Operations by the Defence Aviation Authority.**
Delay in the achievement of AMTC and SR.	Monitor progress of Operational Test and Evaluation objectives achievement required to support issue of an AMTC and SR. Liaise closely with the Australian Defence Force airworthiness authority secretariat to understand Airworthiness Board requirements and schedule, and with Airbus Defence and Space to understand progress on rectification of non-compliances. **This risk has been retired due to Defence Aviation Authority issue of AMTC / SR for KC-30A and SFP for Aerial Refuelling Boom Operations.**
Delays in the rectification of Contractual Non – Conformances.	Actively monitor Airbus Defence and Space issue of Service Bulletins and completion of outstanding obligations that were agreed as part of each aircraft acceptance process and documented in accordance with the contract. **This risk has been downgraded to medium due to the acceptance of all five KC-30A aircraft and maturity of Airbus Defence and Space processes for the issue of Service Bulletins through the Through Life Support contract.**

Delays in the development of Operational Airworthiness assessments.	Review and revise Operational Airworthiness strategy and procedures as necessary to ensure efficiency. Workshop suitable solutions with subject matter experts providing recommendations to the Operational Airworthiness Authority Representative **(OAAR)** to ensure requirements and schedule are understood and can be achieved. **This risk has been retired due to Operational Airworthiness assessments completion, with OAAR endorsement in support of AMTC / SR.**
Emergent Risks (risk not previously identified but has emerged during 2014-15)	
Description	Remedial Action
N/A	N/A

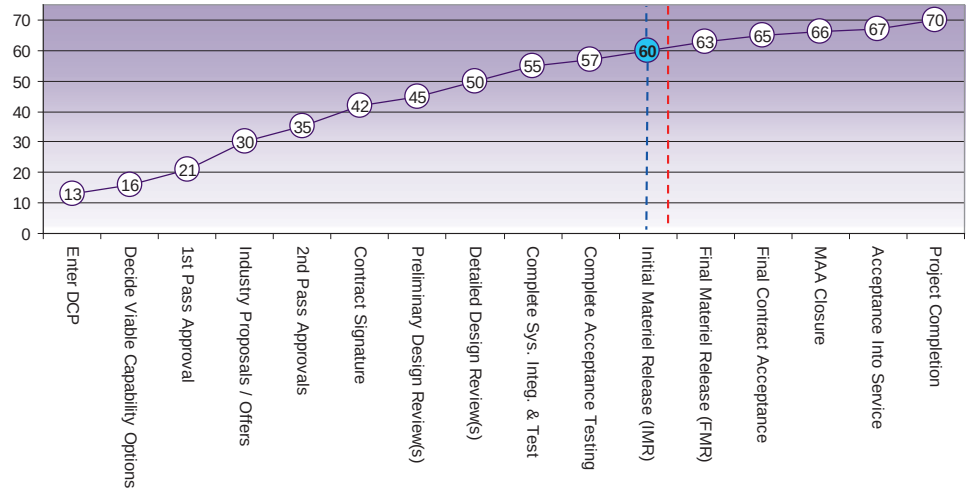
5.2 Major Project Issues

Description	Remedial Action
HMI Program.	The HMI program required Airbus Defence and Space to complete key development and test actions with Defence and the Spanish military certification authority, INTA. Airbus Defence and Space conducted workshops with Defence to complete the Cockpit Acceptance test procedures and in parallel worked with INTA, to resolve the HMI issues associated with the Flight Warning System (FWS) as identified in the INTA HMI report. The FWS was certified by INTA during October 2010 and an updated certification was provided during April 2011. The FWS will be monitored during the remainder of the acquisition test program and during RAAF in-service operations and Operational Test and Evaluation. **This issue has been retired due to the completion of the HMI program.**
Difficulty in achieving contracted schedule.	Continue to contribute to maintaining a current and robust joint project schedule and foster commitment by both parties to it. Conduct a detailed schedule analysis at each Project Management Review. Commitment by both parties for open and honest communication for the joint management of schedule risks. **Under the agreed Contractor Master Schedule delivered as part of Deed of Settlement 4 there were a number of contractual milestones successfully completed and accepted that included both ARBS and MPS as well as completion of modification programs on two KC-30A aircraft that bought both aircraft to a common configuration for Air Force to commence Air to Air refuelling operations.** **This issue has been retired.**
Maturity of Mission Planning System.	Detailed sub-system specification have been developed and agreed. System performance at initial acceptance has been tested and shortfalls documented and agreed. An interim MPS solution, with workarounds for shortfalls, was agreed and implemented. Further development of the MPS will be undertaken under a more robust systems engineering approach. **This issue has been retired due to the contractual acceptance of Milestone 26F which was accepted in December 2014.**

Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	Total
Project Stage	Benchmark	**10**	8	8	8	9	8	**9**	**60**
Initial Materiel Release	Project Status	9	**8**	9	9	9	8	9	**61**
	Explanation	The project has completed acceptance and hand over to Air Force of **five** aircraft in a configuration able to support the achievement of an Initial Operational Capability. • **Schedule: FMR is predicted to run five months behind the current planned delivery date of December 2015 as specified in the Material Acquisition Agreement. This is linked to completion of the aircraft modification program and Service Release of the Boom Capability.** • **Requirement: Project requirements have been successfully tested with acceptance of MPS and the Aerial Refuelling Boom after completion of the flight test program. Project has been removed from Projects of Concern Listing.** • **Technical Understanding:** Air Force is fully cognisant of the delivered capability and publications for operation and maintenance of the KC-30A tanker capability.							



2013-14 MPR Status - - - - 2014-15 MPR Status - - - -

Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
The development and introduction into service of a first-of-type military (aircraft) mission and support system is always harder than it first appears. At contract signature the project appeared a reasonably low risk venture. However, over the course of the project, it became apparent to both the DMO and the contractor that the integration of the fuel delivery systems and military systems on a commercial aircraft introduced many challenges including: software integration issues, underestimation of developmental and certification testing schedule. As a result, a higher effort for a greater period of time was required by the DMO to support the program.	First of Type Equipment
Technical (design) maturity assessment: a tender definition activity was undertaken following selection of the preferred supplier and prior to contract negotiations. However, due to time constraints and the breadth of review activities, it was not possible to conduct a comprehensive technical review and maturity assessment. As a consequence, an aggressive system design schedule was agreed that subsequently proved difficult to achieve due to lower design maturity - and hence higher development effort - on some systems. The additional development effort was accommodated under the change to a two-phased conversion and test process. In hindsight, once it became apparent that Australia was the lead customer for the A330 MRTT, a more robust design maturity assessment should have been undertaken under a funded design development process prior to contract award.	First of Type Equipment Schedule Management
Whilst this project preceded improvements in the capability definition documents (Operational Concept Document, Function and Performance Specification and Test Concept Description), the intent of these documents was included in tender documentation and refined during contract negotiation for inclusion in the Acquisition Contract. The Contractor's internal requirements management process did not adequately support a robust process for customer clarification of the operational intent leading to protracted development and rework. There is a need to ensure that a robust process exists to achieve a common understanding of derived requirements and operational intent, and that it is agreed in the early stages of the project life-cycle.	Requirements Management

Section 8 – Project Line Management

8.1 Project Line Management in 2014-15

Position	Name
General Manager	Ms Shireane McKinnie
Division Head	AVM Leigh Gordon
Branch Head	AIRCDRE Philip Tammen
Project Director	Mr Luke Brown
Project Manager	Mr Grant Cameron