



Australian Government
Bureau of Meteorology

Aviation Meteorological Services – Australian Bureau of Meteorology

3 October 2018

Ted Williams






- New Products
- Embedded Met Experience
- Review of Aviation Weather Services



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MetCDM



Airservices MET CDM Rate Calculator
Software Version 2.1.92
29/08/2018 04:47:57 (UTC)

TAF AMD YSSY 260150Z 26010700
260000KT 9999 -SHRA FEW012 SCT035
FM200400Z 22014KT 9999 -SHRA FEW010 SCT025
FM200700Z 16000KT 9999 -SHRA SCT030
FM201400Z 29000KT 9999 SCT020
FM270000Z 00015KT CAVOK
INTER 2502Z 2500Z 4000 SHRA BKN010
PROB30 TEMPO 2504Z 2507Z VRB25G35KT 3000 TSRA BKN010 SCT030CB
PROB30 2515Z 2522Z 4000 BR
RMK
T 54 14 14 13 Q 1023 1021 1021 1022

Amended TAF:

YSSY

Wednesday, 26 Sep 2018 - Run 4 - SM/TM

Fuel Light: 1013
Lamp Light: 0219

BUSINESS RULES RATES FROM TAF													SHOW MORE CALCULATIONS			
DATE/TIME	2000Z	2010Z	2020Z	2030Z	2040Z	2050Z	2060Z	2070Z	2080Z	2090Z	2100Z	2110Z	2120Z	2130Z	2140Z	2150Z
BUSINESS RULES SUMMARY																
BR RWY																
Tolerated (Worst)					34	34	34	34	34	34	34	34	34	34	34	34
Crossed (Worst)					34	34	34	34	34	34	34	34	34	34	34	34
BR Approach Mode					34	34	34	34	34	34	34	34	34	34	34	34
BR Rate					34	34	34	34	34	34	34	34	34	34	34	34
MET CDM RATE																
Initial Time																
Significant Wind Speed																
Anticipated RWY																
Tolerated (Worst RWY)																
Crossed (Worst RWY)																
Tolerated (Cross RWY)																
Crossed (Cross RWY)																
Tolerated (Cross RWY)																
Crossed (Cross RWY)																
Anticipated Approach																
MET CDM Initial Rate																
MET CDM Index																
MET CDM S-Factor																
MET CDM Final Rate																
TOU SM/TM FINAL ADJUSTMENT																
SM/TM Index																
SM/TM S-Factor																
Final Arrival Rates																
NON MET CDM NOTES																
Non MET CDM Index																
PREVIOUS ARRIVAL RATES																
Previous Arrival Rates																
PROGRAMMED RATES																
Programmed Rates																
MET CDM NOTES																
MET CDM Notes																
SM/TM NOTES																
NON MET CDM NOTES																
RUNNING HISTORY																
Run 1																
Run 2																
Run 3																
Run 4																

NCC Embedded Met
Airline Met Units
Aviation Met
ATC



YSSY		Wednesday, 26 Sep 2018 - Run 4 - SM/TM															First Light: 1913		
		BUSINESS RULES RATES FROM TAF															SHOW / HIDE CALCULATIONS		
DATE/TIME		252000	252100	252200	252300	260000	260100	260200	260300	260400	260500	260600	260700	260800	260900	261000	261100	261200	
BUSINESS RULES SUMMARY																			
BR RWY							34	34*	34*	34	34	34	16*	16	16	16	16	16	
Tailwind (Worst)							-3.0	-3.0	-3.0	35.0	35.0	35.0	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9	
Crosswind (Worst)							7.4	7.4	7.4	35.0	35.0	35.0	1.1	1.1	1.1	1.1	1.1	1.1	
BR Approach Mode							DVAA	DVAA*	DVAA*	ILSB	ILSB	ILSB	DVAB*	DVAB	DVAB	DVAB	DVAB	DVAB	
BR Rate							44	39	39	34	34	34	36	38	38	38	38	31	
RESET BELOW		MET CDM RATE															EXPAND/COMPACT MET CDM		
Wind *True	LOAD WINDS										220	220	160	160	160	160	160	160	
Significant Wind Speed											14	14	8	8	8	8	8	8	
Anticipated RWY											16	16	16	16	16	16	16	16	
Tailwind (Main RWY)											-8.6	-8.6	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9	
Crosswind (Main RWY)											11.0	11.0	1.1	1.1	1.1	1.1	1.1	1.1	
Tailwind (Cross RWY)																			
Crosswind (Cross RWY)																			
Anticipated Approach											TS<20	TS<20	TS>20	DVAB	DVAB	DVAB	DVAB	DVAB	
MET CDM Initial Rate											26	26	34	38	38	38	38	31	
MET CDM Notes											1	1	2	3	3	3	3	3	
MET CDM X-Factor	EXPORT PDF																		
MET CDM Final Rate	NOTIFY SM/TM										26	26	34	38	38	38	38	31	



TCU SM/TM FINAL ADJUSTMENT																	
SM/TM Notes																	
SM/TM X-Factor																	
Final Arrival Rates	<input type="button" value="NOTIFY NCC"/>									26	26	34	38	38	38	38	31
	NON MET CDM NOTES															<input type="button" value="SHOW / HIDE CDM"/>	
Non MET CDM Notes																	
DATE/TIME	252000	252100	252200	252300	260000	260100	260200	260300	260400	260500	260600	260700	260800	260900	261000	261100	261200
Previous Arrival Rates	38	34	34	34	34	26	26	26	26	34	34	34	38	38	38	38	32
Programmed Rates																	
MET CDM Notes	1	Thunderstorms within 20nm likely, with storms to the north particularly affecting operations.															
	2	Thunderstorm activity is likely to reduce though activity within the TMA is likely to continue.															
	3	Showers and cloud will linger in the area during the evening, rate suggested as per TAF.															



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Transformation of Aviation Meteorological Services

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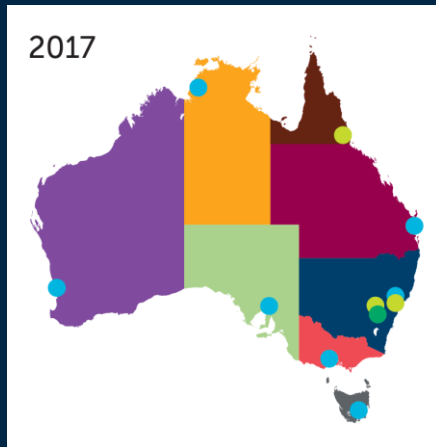
Case for Change

Current operations

- Forecasters provide public and aviation weather
- Forecasting delivered from 11 discrete locations

Key issues:

- Service improvements are complex and costly
- Workload managed within locations
- Scope to strengthen and uplift aviation specialisation.



Future service demands

- Industry trends
 - Growth in air movements
 - Global operations and sourcing
- Future services
 - Digital and graphical met information, in cockpit
 - Air Traffic Flow Management, OneSky
 - Regional Hazardous Weather Advisory Centres (VAAC, TCAC)

Transformation Blueprint



Quality

- Dedicated aviation specialists with a deep understanding of the industry

Responsive

- Service improvements faster due to consolidation of people and ICT

Resilient

- Two aviation centres underpin continuity; structured training and smart technologies to strengthen and deepen local aviation knowledge

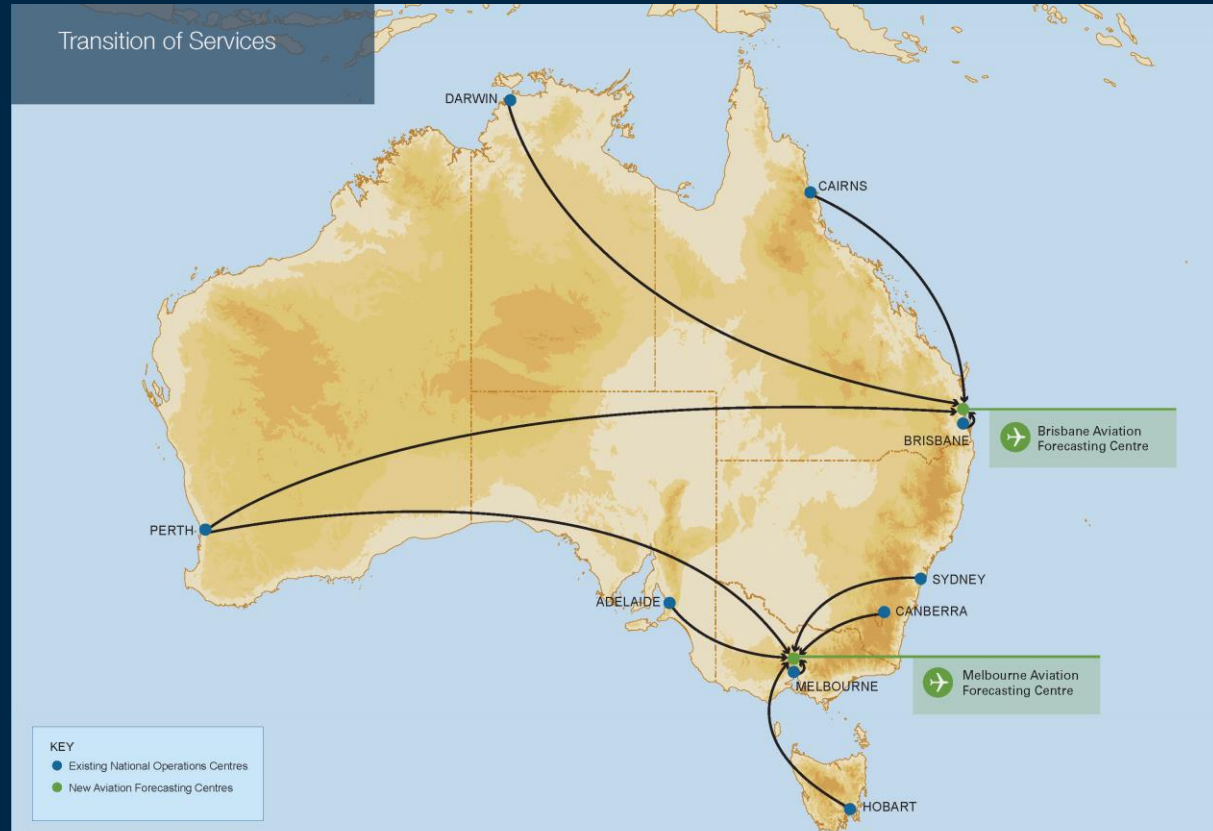
Flexible

- Operations that efficiently scale to tactical loads and accommodate service expansion, including new and expanded services



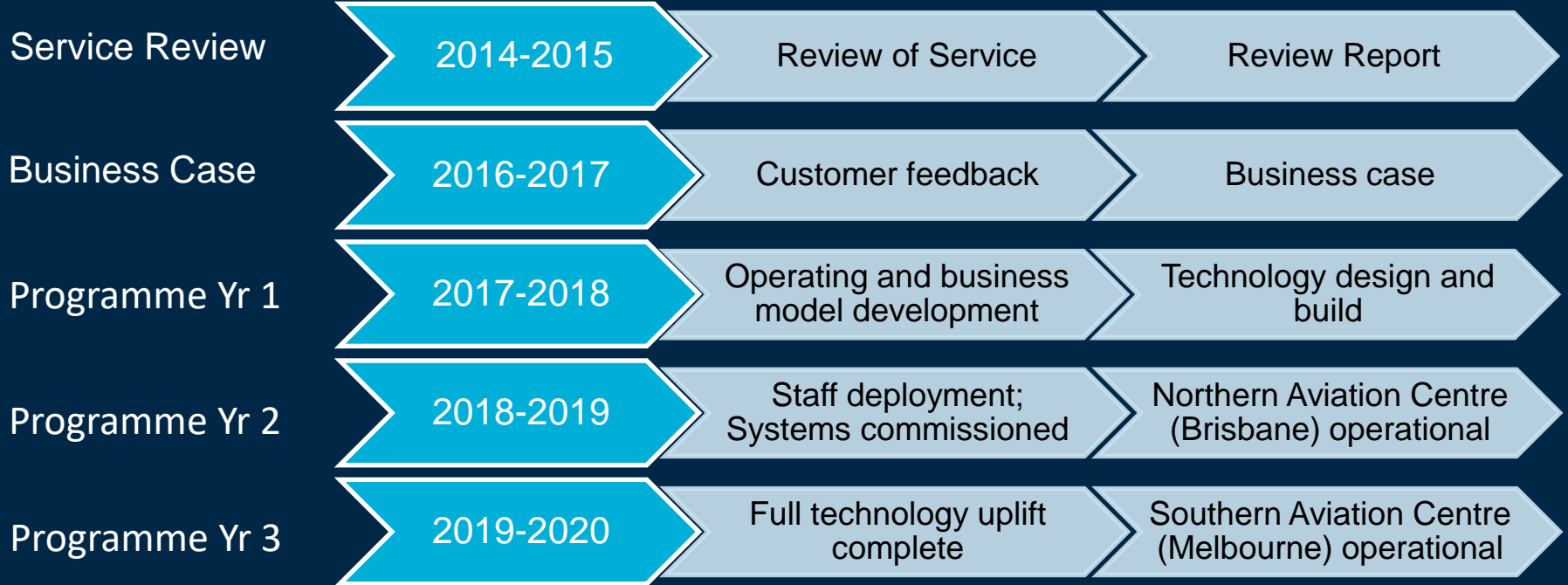
Technology Uplift

- Operating environment:
 - simpler, swifter, robust
- Improved Tools
 - Flexible workload
 - Intelligent alerts
 - Situational awareness
- Training / Learning
 - Knowledge-base
 - Immersive simulator





Waypoints





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More information:

Aviation Weather Services

<http://www.bom.gov.au/aviation/>

Contact us on:

Aviation_Transformation@bom.gov.au





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Thank you

