

Air Wing Readiness Rollup

Given a set of aircraft with associated mission capable rates, aviators with mission qualification rates and a chance of fleetwide grounding of two aircraft types (Strike Fighter and Growler) we must estimate the mission capable rate of the air wing as a whole for two types of missions requiring specified numbers of aircraft.

Air Wing Assets



Strike Fighters



Growlers

Aircraft



Hawkeyes

Aviators



Counter Air



Maritime

F/18 Fleetwide Issue



Emergency Airworthiness Directive
Leads to Temporary Grounding
Chance 3%

Number Available

40

5

4

Mission Capable Rate

75%

80%

80%

% Qualified

40

40

75%

85%

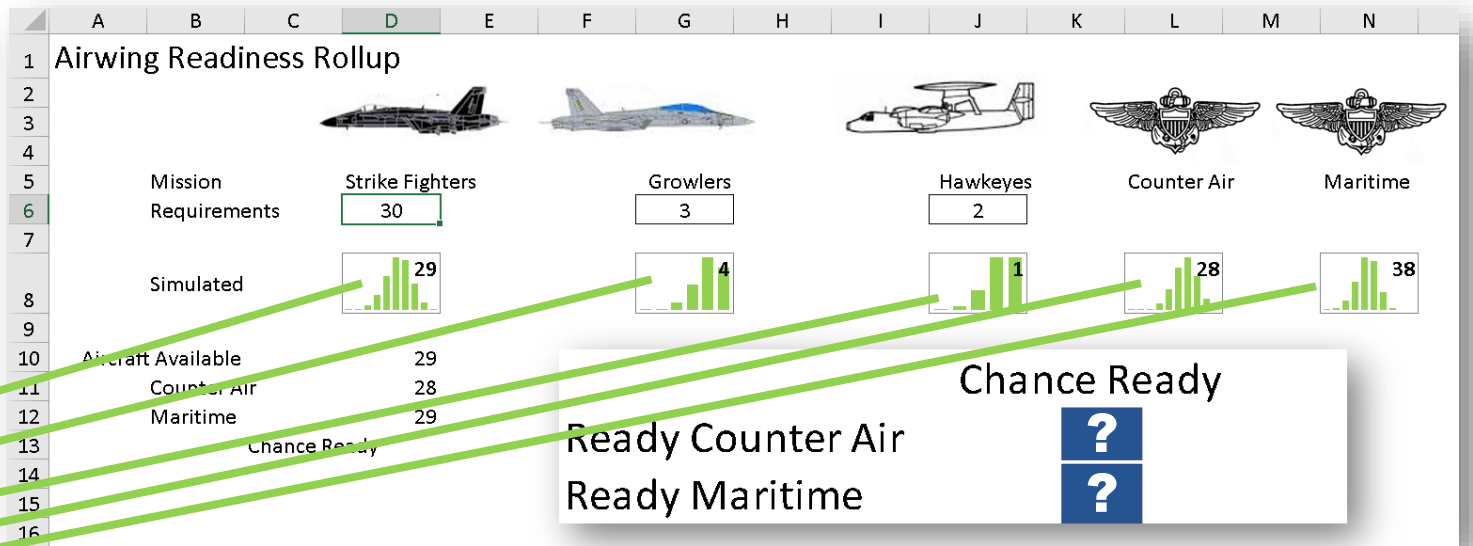
Question 1: What are the chances of being ready for a Counter Air Action or Maritime mission each requiring 25 Strike Fighters, 3 Growlers and 2 Hawkeyes?

Question 2: What are the chances if the required Strike Fighters is increased to 30?

Question 3: How are you solving these kinds of problem today?

Rollup Network Graph

A	B	C	D	E	F	G
1	PM_Trials	1000	Air Wing SIP Library			
2	PM_Lib_Provenance					
3						
4			Meta Data	Index		
5			Average	1001		
6	Click [+] to show data					
7		Strike_Fighters	Growler	Hawkeye	Cntr_Air	Maritime
8	1	29	4	3	30	30
9	2	34	4	3	31	38
10	:	:	:	:	:	:
11	999	26	5	4	28	31
12	1000	25	4	3	32	36



A	B	C	D	E	F	G	H	I
1	Variable Name	Strike_Fighters						
2	Number of Aircraft	40						
3	Reliability	75%						
4	Var ID	1						
5								
6								
7	Actual Number Available		<input type="text"/>					

A	B	C	D	E	F	G	H	I
1	Variable Name	Hawkeyes						
2	Number of Aircraft	4						
3	Reliability	80%						
4	Var ID	3						
5								
6								
7	Actual Number Available		<input type="text"/>					

A	B	C	D	E	F	G	H
1	Variable Name	Maritime					
2	Number of Aviators	40					
3	Percent qualified	85%					
4	Var ID	5					
5							
6							
7	Actual Number Available		<input type="text"/>				

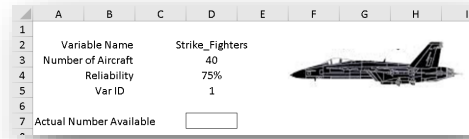
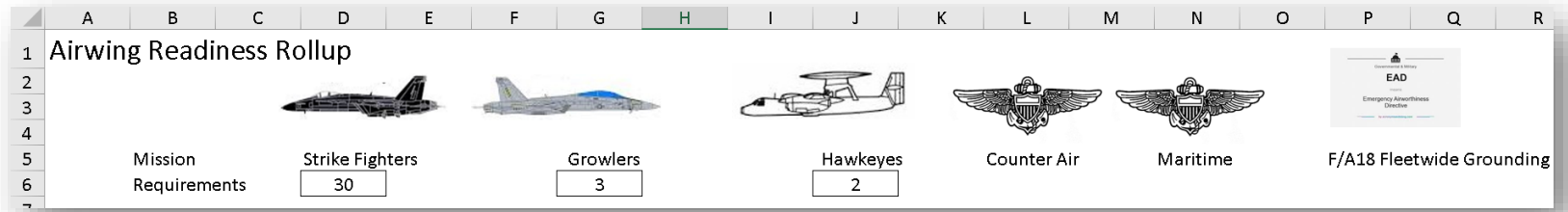
A	B	C	D	E	F	G	H
1	Variable Name	F18_EAD		Fleetwide F/A18 EAD: Temporary Grounding			
2	Chance	3%					
3							
4	Var ID	6					
5							
6							
7	Fleet Grounded 1=yes, 0=no		<input type="text"/>				

A	B	C	D	E	F	G	H	I
1	Variable Name	Growlers						
2	Number of Aircraft	5						
3	Reliability	80%						
4	Var ID	2						
5								
6								
7	Actual Number Available		<input type="text"/>					

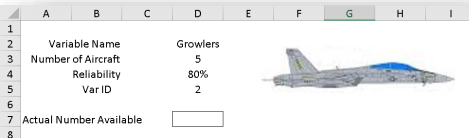
A	B	C	D	E	F	G	H
1	Variable Name	Counter_Air					
2	Number of Aviators	40					
3	Percent qualified	80%					
4	Var ID	4					
5							
6							
7	Actual Number Available		<input type="text"/>				

The Kit

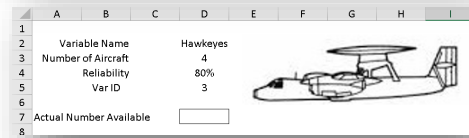
Readiness Rollup Dashboard



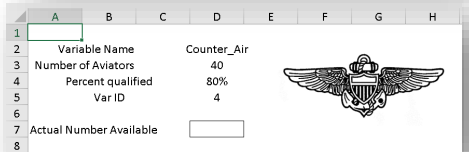
Strike Fighters



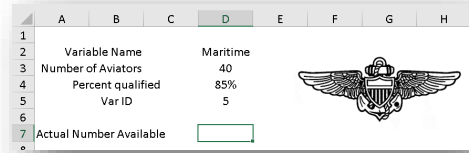
Growlers



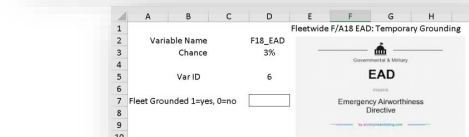
Hawkeyes



Counter Air



Maritime



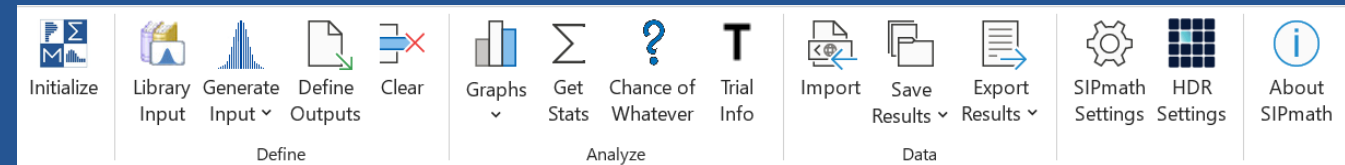
EAD

The Tools

The Excel tools from ProbabilityManagement.org create interactive simulations in Excel which run without the Tools themselves.

SIPmath Modeler Tools

Full function Monte Carlo simulation plus the ability to read and write SIP Libraries for use by others using either the SIPmath Tools or ChanceCalc.



ChanceCalc

Easy to use add-in that reads SIPmath™ 2.0 and 3.0 Standard files then calculates the chance of whatever with a few keystrokes.

