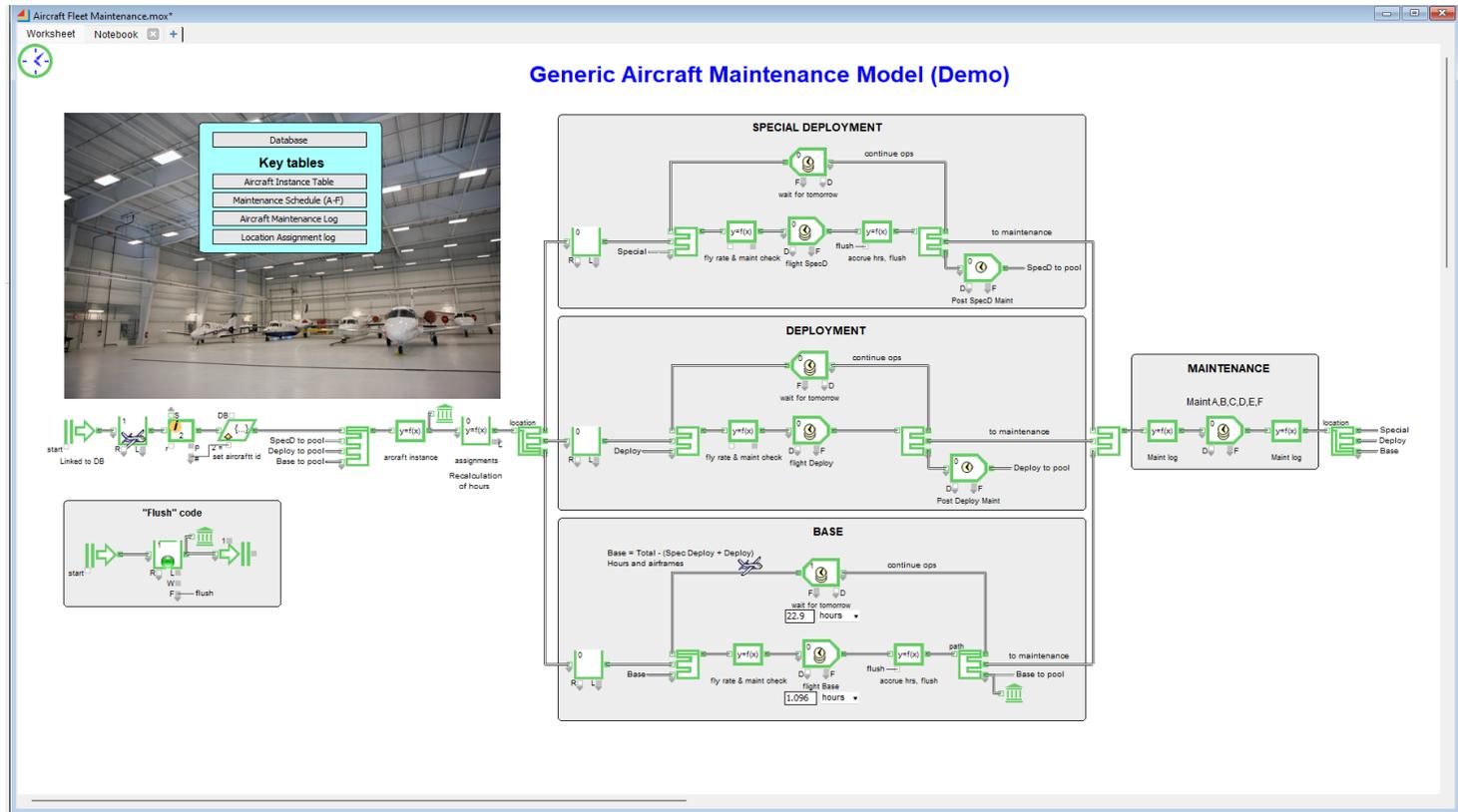




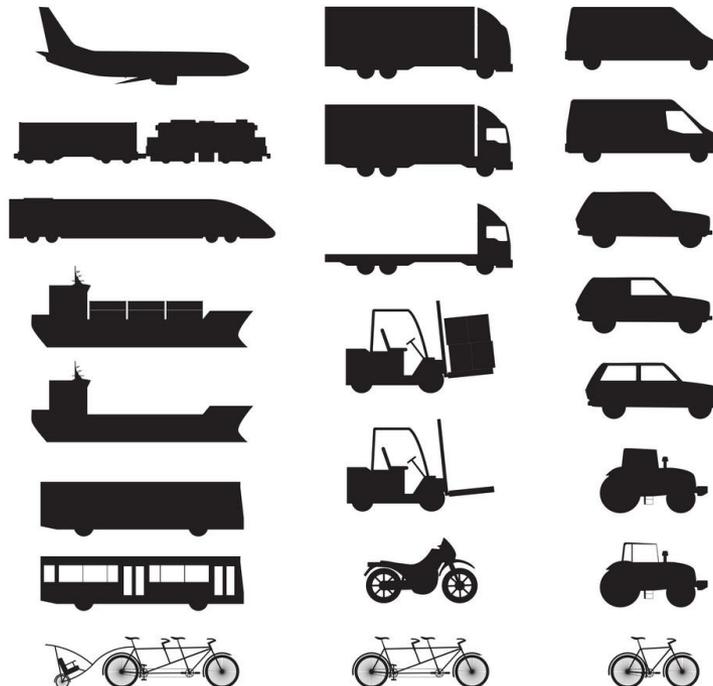
# Aircraft Fleet Maintenance Model





# Potential Scope

- This is a demo model.
- Could be used to model usage and events for any fleet of aircraft, trucks, trains, widgets.





# Demo

- Model tracks and routes aircraft as individual “items”.
- Model has aircraft conducting operational events and undertaking maintenance events on schedule.
- Scheduled maintenance is modelled in this demo, but breakdown maintenance could also be modelled.
- Operational events for the 7 included aircraft will cease for the duration of maintenance events.
- Aircraft will spend different durations of time in maintenance depending on the type of scheduled maintenance.
- No human resources modelled, but they could be included.





# Demo

## Maintenance Log

Aircraft Fleet Maintenance.mox\*

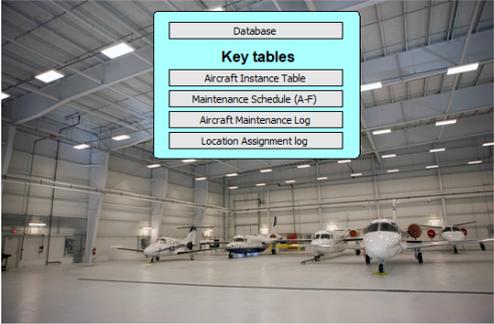
Worksheet Notebook

Generic Aircraft Maintenance Model (Demo)

Database

**Key tables**

- Aircraft Instance Table
- Maintenance Schedule (A-F)
- Aircraft Maintenance Log
- Location Assignment log



start → DB → R → L → P → DB → P → set aircraft id → Speed to pool → Deploy to pool → Base to pool → aircraft instance → assignments → Recalculation of hours

**"Flush" code**

start → R → L → W → F → flush

Table: "Maintenance log[8] r121" <CH-47 Maintenance[5]>

	maintenance log id[1]	aircraft id[2]	name[3]	type[4]	current hrs [5]	entered[6]	duration [7]	departed[8]
1	1	4	A004	A	25.0	13/2/2015 1:42:00	0.5	13/2/2015 13:42:00
2	2	2	A002	A	25.0	17/2/2015 1:50:00	0.5	17/2/2015 13:50:00
3	3	3	A003	A	25.0	18/2/2015 1:13:00	0.5	18/2/2015 13:13:00
4	4	1	A001	A	25.0	18/2/2015 1:22:00	0.5	18/2/2015 13:22:00
5	5	5	A005	C	100.0	21/2/2015 0:54:00	2.0	23/2/2015 0:54:00
6	6	7	A007	B	50.0	5/3/2015 0:45:00	1.0	6/3/2015 0:45:00
7	7	4	A004	B	50.0	7/3/2015 14:36:00	1.0	8/3/2015 14:36:00
8	8	6	A006	B	50.0	10/3/2015 0:16:00	1.0	11/3/2015 0:16:00
9	9	2	A002	B	50.0	11/3/2015 14:44:00	1.0	12/3/2015 14:44:00
10	10	5	A005	A	125.0	16/3/2015 2:53:00	0.5	16/3/2015 14:53:00
11	11	5	A005	B	150.0	7/4/2015 15:46:00	1.0	8/4/2015 15:46:00
12	12	7	A007	C	100.0	18/4/2015 3:37:00	2.0	20/4/2015 3:37:00
13	13	4	A004	C	100.0	20/4/2015 17:28:00	2.0	22/4/2015 17:28:00
14	14	6	A006	C	100.0	23/4/2015 3:09:00	2.0	25/4/2015 3:09:00
15	15	2	A002	C	100.0	24/4/2015 17:36:00	2.0	26/4/2015 17:36:00
16	16	3	A003	C	100.0	25/4/2015 15:54:00	2.0	27/4/2015 15:54:00
17	17	1	A001	C	100.0	25/4/2015 16:02:00	2.0	27/4/2015 16:02:00
18	18	7	A007	A	125.0	11/5/2015 5:36:00	0.5	11/5/2015 17:36:00
19	19	4	A004	A	125.0	13/5/2015 19:27:00	0.5	14/5/2015 7:27:00
20	20	6	A006	A	125.0	16/5/2015 5:08:00	0.5	16/5/2015 17:08:00
21	21	2	A002	A	125.0	17/5/2015 19:36:00	0.5	18/5/2015 7:36:00
22	22	3	A003	A	125.0	18/5/2015 17:53:00	0.5	19/5/2015 5:53:00
23	23	1	A001	A	125.0	18/5/2015 18:01:00	0.5	19/5/2015 6:01:00
24	24	5	A005	D	200.0	21/5/2015 18:39:00	5.0	26/5/2015 18:39:00
25	25	7	A007	B	150.0	1/6/2015 19:36:00	1.0	2/6/2015 19:36:00
26	26	4	A004	B	150.0	5/6/2015 8:21:00	1.0	6/6/2015 8:21:00
27	27	6	A006	B	150.0	7/6/2015 18:01:00	1.0	8/6/2015 18:01:00
28	28	2	A002	B	150.0	9/6/2015 8:29:00	1.0	10/6/2015 8:29:00
29	29	5	A005	A	225.0	16/6/2015 20:38:00	0.5	17/6/2015 8:38:00
30	30	5	A005	B	250.0	9/7/2015 9:32:00	1.0	10/7/2015 9:32:00
31	31	7	A007	D	200.0	15/7/2015 22:28:00	5.0	20/7/2015 22:28:00

MAINTENANCE

M A B C D E F

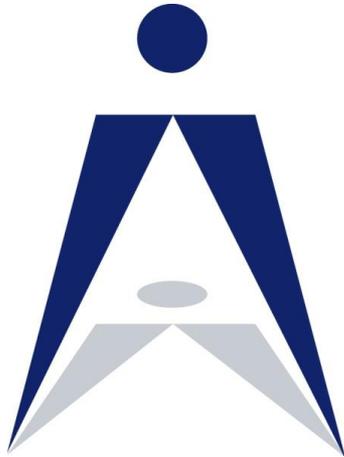
location → Special → Deploy → Base

Maint log



# So what?

- Insight Acumen is able to develop a model to model attributes of your fleet, whether aircraft, trucks, trains, cars or widgets.
- These attributes can be tracked over time and their impacts tested in the future.
- ExtendSim is way more powerful than MS Excel and by design is able to model changing states over time.
- So users can run their current state model with various SME future assumptions and constraints, then view their system state one day in the future, or one week, or one month, or 10 years into the future.
- Test those blue-sky ideas in a low-risk and powerful modelling & simulation environment.



**Insight**Acumen

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