

FLIGHT PLANNING

THROUGH THE EYE OF THE DISPATCHER

GEOFF KINGSTON
FLIGHT PLANNING MANAGER

THE QUESTIONS ASKED....

- > How do we process our flight plans on the day of operation?
- > Our relationship with our CFSP in dealing with flight planning problems
- > What if regulations appear and what are the solutions considered?
- > What are our predictability challenges?

FACTS AND FIGURES - FY17



- > 80.2 million passengers
- > 9.7% year on year growth
- > Record 92.6% load factor
- > Continued focus on number one and number two positions in Europe's leading airports
- > 98% of our capacity touches a number one or number two airport
- > 1% drop in OTP to 76% driven primarily by airspace congestion/ATC staffing and weather
- > 27* bases – UK, France, Germany, Italy, Portugal
- > 622 city pairs / 123 airports / 31 countries
- > 1800 flights a day
- > Approximately 70% of which transit through French airspace!

* 28 Bases with ex Air Berlin TXL operation online Summer 18

The fleet

Fleet Totals

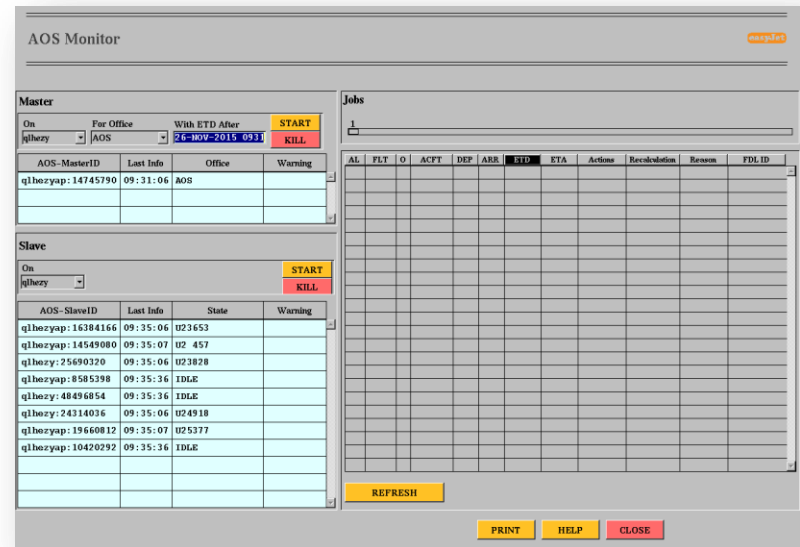
	Nov	Dec	Jan
Y156	142	138	137
Y180	56	56	56
Y186	83	83	83
Total	281	277	276

- > 130 NEO aircraft on order
- > 100 x A320
- > 30 x A321



HOW DO WE FLIGHT PLAN?

- > 1 x Senior Flight Planner
- > 3 x Flight Planning Officers
- > Flight Plan generation and filing
- > EOBT/Regulation/Scenario management



LIDO/Flight

- > All calculations are automated through the AOS monitor.....'Perfect World'
- > Flight plan by exception/special requests
- > The calculation of a scheduled flight plan begins roughly 9-12 hours prior to STD
- > Database of at least one pre-defined or 'PRED' route per city pair
- > LIDO optimised routes
- > Fuel / Time costs, ATC charges, Weather, AUP/UUP, RAD
- > Most efficient route automatically filed

How do we flight plan?

AL Flight-No. OS Date DEP STD STA DEST Init. Time TF

02 1974 21NOV17 LCPH 211755 212305 EGCC 211020 Scenario

Operational Case

Standard ST Set to Def. 29 211755 212305 23R Graphic

ROUTE	MCT/R	FOMANIA	PFOMAN2	MCT/R
OFF NO	2	4	5	6
REG	GEZOV	GEZOV	GEZOV	GEZOV
CRUISE	CI8	CI8	CI8	CI8
TRIP	12654	12916	13108	12652
TTIME	0516	0517	0524	0516
ETA	2331	2332	2339	2331
COSTS	9347	9501	9550	9345
CONT	475	484	486	475
CONT POL	CONT95	CONT95	CONT95	CONT95
ALTN	EGGP	EGGP	EGGP	EGGP
AFUEL	900	900	900	899
HOLDING	1077	1077	1077	1077
PLNTOF	15106	15377	15571	15103
P EXTRA	1994T	1723T	1529T	1997T
DIST	1934	1943	1984	1934
AVG WC	M059	M058	M060	M059
MAXZFW	62500	62500	62500	62500
ESTZFW	59900	59900	59900	59900
PLNZFW	59900	59900	59900	59900
MALTOW	77000	77000	77000	77000
PLNTOW	75006	75277	75471	75003
MALLW	66000	66000	66000	66000
PLNLW	62352	62361	62363	62351
ADDFU				
TCAP	19332	19332	19332	19332
SAVINGS				
MAX FL				

Climb

Procedure Cost Index
ECON 8

Cruise

Procedure Cost Index
ECON 8

Fixed MN Airspace/Airway VSOPS
Optimum MN OFF

Descent

Procedure Cost Index
ECON 8

REM Fuel Fuel Gravity
0.000

Restriction view. Special Fuel ...

Route Options ... Route Survey ...

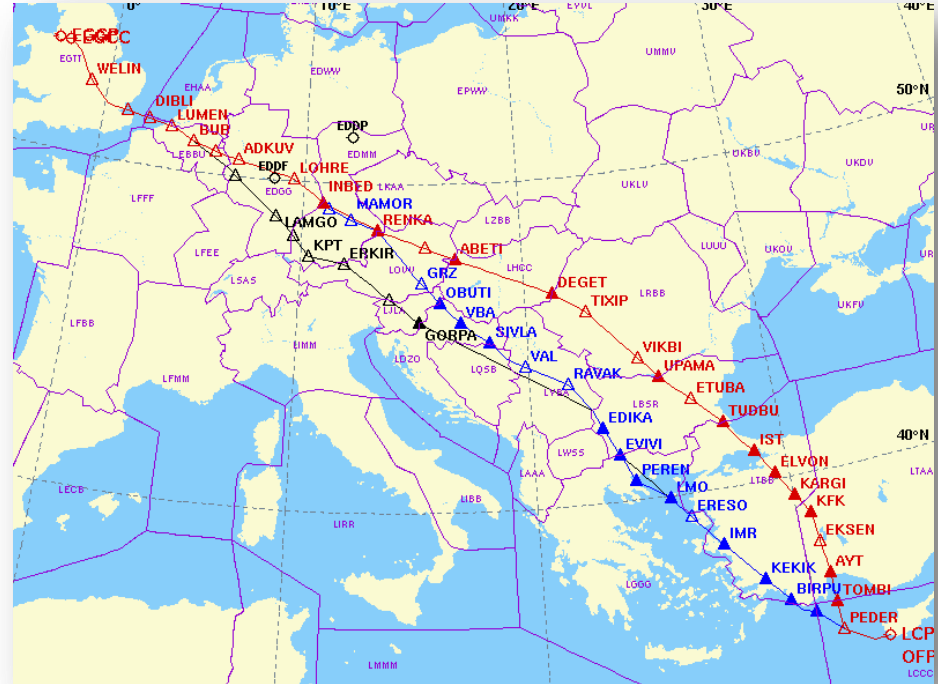
Inflight ... ALTN Survey ...

Tankering ... ETOPS ...

Reclearance ... Restriction ...

Analysis Opt Param ...

In background



- > Second re-optimisation calculation performed on all flight plans prior to crew report to account for:
 - Updated en route weather
 - Updated airport suitability check
 - RWY/SID/STAR changes
 - NOTAMs

Relationship with cfsp

- > 'Exception handling'... 5% error rate
- > 90 flights
- > 5 mins per plan
- > 7.5 man hours just to get the schedule filed
- > Consumes most resource. Is it an efficient use of time? 70/30 split
- > AO database and CFSP generated routes
- > Growing AO schedules and increased airspace complexities leading us towards a perfect storm
- > Snowball effect as a result of traffic volume
- > Daily contact LIDO <-> EZY
- > Error reporting....

Relationship with cfsp

easyJet

Weekly Navigation Review

Period: 28OCT17 –03NOV17

TOTALS	This week:	Previous week:
Total Sectors:	N/A	N/A
Total Rejects:	132	253
Total No Preds Calculated:	63	N/A

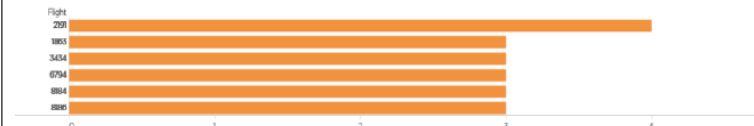
Rejects:

Top 10 - Citypair

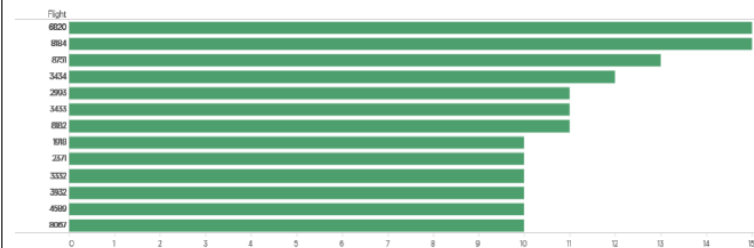


No Preds Calculated:

No Preds Calculated - 7d



No Preds Calculated - 28d



City Pair	Issue	Fix	LIDO/NM Ticket Number
LINLW	LINLW1 & 2 only calculate with TFR off and MCT incorrect	PRED only (TFR off)	N/A
VCEMRS	PRED REJ (OCC request)	PRED AMD	N/A
GVAPMO	PRED FAIL AND MCT INCORRECT	PRED AMD	N/A
VCETLV	NO RR1 SCN PRED	VCETLV2 ADDED.	N/A
BRSMHA	NO RVK PRED	BRSMHA4 ADDED	N/A

Slot MONITORING

- > CHMI used as primary ATC slot monitoring tool
- > Flights sorted in terms of 'worst' slot delay
- > Acts as a to do list. 'Who can I help?'
- > Scenarios/DSNA Level Caps monitored/actioned in the same way

AO EZY Flight List at 21-13:33 / ATFCM

Tue 21 Nov 2017 WEF 08:20 UNT 23:40

TFC Type: Traffic Demand Entry Occupancy

Where: Aircraft Operator(s) Is: EZY FMP

Compare: Traffic Load

READY Flights Only FLS 464/701 flights

TOT	STA	ARCID	ATYP	ADEP	ADES	D	RM	F	RFL	IOBT	LV	U	E/CTOT	X	F	S	CL	AT	TOBT	TSAT	TT	A/TTOT	Delay	E/C/ATA	R	Opp	W	MSG	REGUL+	O	TI	EFL	TO
11:35E		EZY239K	A320	EGKK	EHAM		OEIVL	I	230	11:20	+15:20		15:52C		N	R	S				15		23*	12:24E	N	A	REA	EHAMA21X	N			230	
12:52E		EZY65MH	A320	EGGW	EHAM		GEZOR	I	230	12:50	+16:42		16:00C		N	R	T				10		170	13:36E	N	A	REA	EHAMA21X	N			230	
13:40E		EZY982U	A319	LKPR	EHAM		GEZAA	I	380	12:33	+17:29		15:28C		N	I	C		12:33	15:15	11	13:40t	108	14:55E	N	A	SRM	EHAMA21X	N			380	
15:05E		EZY300S	A319	EGSS	EHAM		GEZIT	I	210	14:50	+18:50		16:04C		N	I	T				15		59	15:42E	N	A	SAM	EHAMA21X	N			210	
15:05E		EZY46CG	A320	EGCC	EHAM		GEZPW	I	310	14:45	+18:45		15:52C		N	I	T				20		47	15:52E	N	A	SAM	EHAMA21X	N			310	
14:44E		EZS41KH	A319	LSGG	EHAM		HBJYG	I	380	14:30	+18:30		15:24C		N	I	C		14:30		14	14:44t	40	15:59E	N	A	SAM	EHAMA21X	N			380	
15:15E		EZY34VP	A20N	EGKK	EHAM		GUZHB	I	230	15:00	+19:00		15:54C		N	I	S				15		39	16:02E	N	A	SAM	EHAMA21X	N			230	
15:35E		EZY35YP	A319	EGMC	EHAM		GEZDL	I	190	15:25	+19:25		16:06C		N	I	S				10		31	16:11E	N	A	SAM	EHAMA21X	N			190	
15:35E		EZY21KJ	A320	EGGW	EHAM		GEZWR	I	230	15:15	+19:15		16:00C		N	I	T				20		25	16:17E	N	A	SAM	EHAMA21X	N			230	
18:10E		EZY98YJ	A319	EGKK	EDDM		GEZAN	I	390	17:55	+21:55										15		*24*		N	A		KFFM1C21	N			390	
15:02E		EZY38XM	A319	LPPT	EDDB		GEZGD	I	380	14:50	+18:50		15:13C		N	I	S				12		11	18:05E	N	A	SAM	KFFM1C21	N			380	
16:08E		EZS13EL	A320	EDDB	LFSB		HBJXD	I	380	16:00	+20:00										8	16:08e	*0*		N	A		KWUR1C21	N			380	
17:15E		EZY15HZ	A320	EGKK	LOWW		GEZWX	I	390	17:00	+21:00										15		*0*		N	A		KFM3C21L	N			390	
17:25E		EZY46TX	A320	LFPD	EDDB		OEIVC	I	370	17:15	+21:15										10		*0*		N	A		KFM3C21L	N			370	
18:07E		EZS4640	A320	LFSB	EDDB		HBJXD	I	350	18:00	+22:00										7		*0*		N	A		KWUR1C21	N			350	
18:20E		EZS78HR	A319	ESSA	LFSB		HBJYI	I	390	18:10	+22:10										10		*0*		N	A		KFFM1C21	N			390	
13:30E		EZY46YA	A319	EGPH	LFPG		GEZAX	t	370	13:15	+17:15		13:30E		F	I	T				12	13:41a		15:00E	N	N						370	
13:30E	LU	EZY98YM	A320	GCTS	EHAM		GEZTE	T	380	13:20	+17:20		13:30E		F	I	T				10	13:30		17:37E	N	N	DES					380	
13:32E		EZY375H	A320	EDDH	LOWS		GEZUR	T	370	13:25	+17:25		13:32E		F	I	C		13:25	13:25	7	13:33a		14:33E	N	N						370	
13:40E	LU	EZY53PK	A319	EGKK	EKCH		GEZBR	I	390	13:25	+17:25		13:40E		N	I	S				15			15:11E	N	N						390	
13:40E	LU	EZY21LU	A320	LFPG	EGPF		GEZWI	t	380	13:30	+17:25		13:40E		F	I	C		13:30	13:30	15	13:47a		15:05E	N	N						380	
13:43E		EZY95BO	A319	EDDB	LFSB		GEZBE	t	330	13:35	+17:35		13:43E		F	I	C		13:30	13:30	8	13:38e		14:55E	N	N						330	

Slot avoidance – considerations

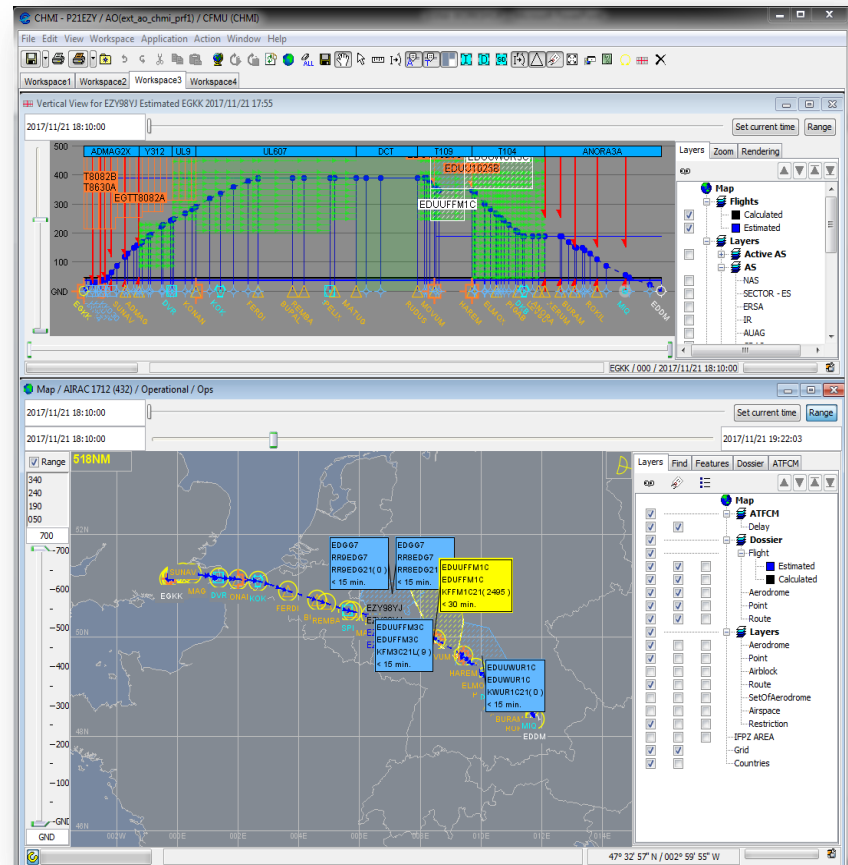
- > How do I avoid the regulation?
- > Can I go under it? Can I go around it?
- > Is my slot above average?
- > Does the slot work for me?
- > Is a reroute actually worth it?
- > Can I slot swap it?
- > What priority is the flight?
- > What knock on effects does

the slot result in?

-crew hours

-airport curfews

- > Human judgement!



SLOT/Scenario/level cap avoidance – ACTIONING A change

- > Example Flight: EZY4060 NCE-ORY STD 0530Z
- > Flight Plan filed at 1534 D-1

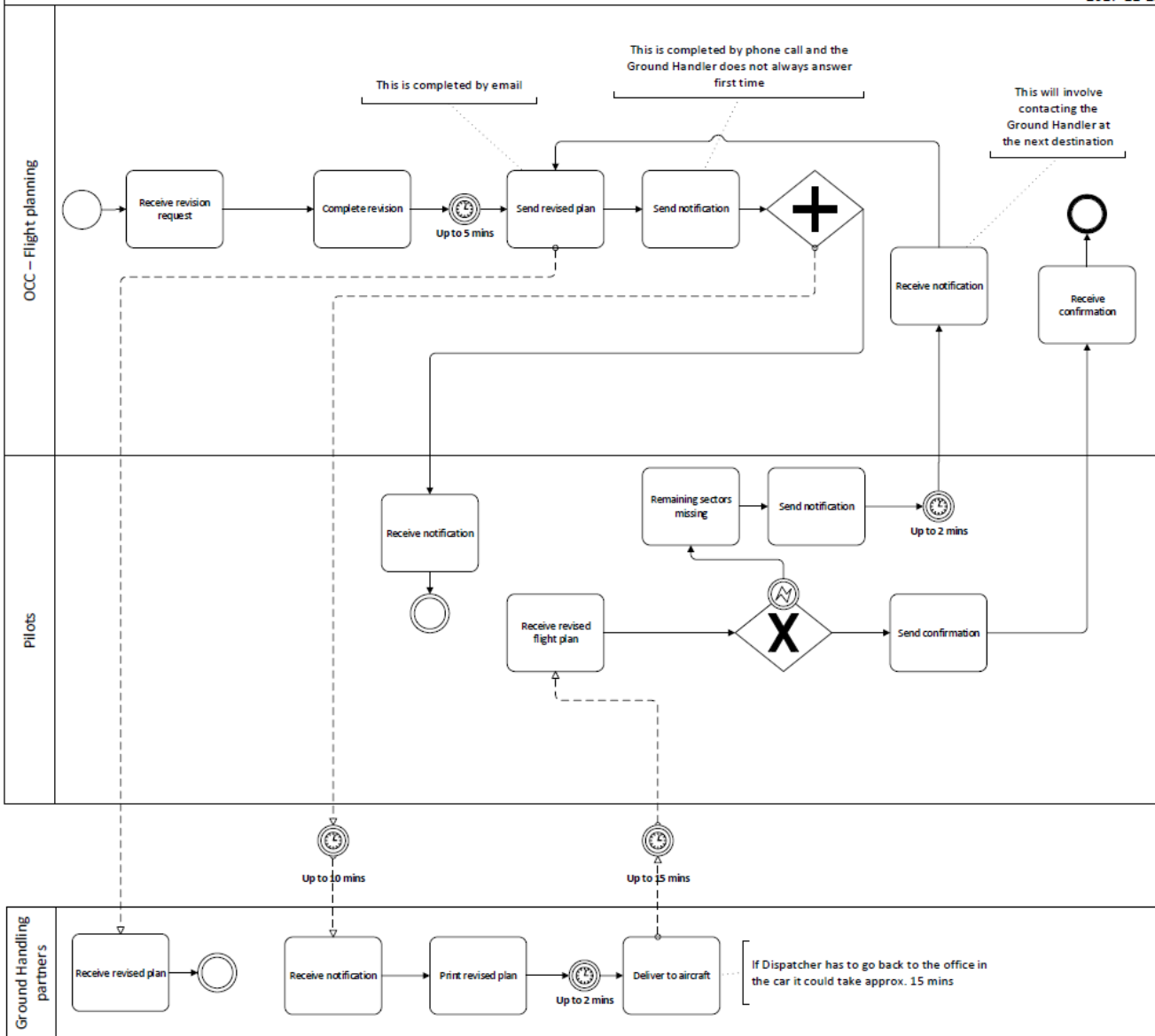
- > Flight Plan suspended due Scenario
- > Flight Dispatcher manually amends Flight Plan as per requirement (5-10 mins)
- > Flight taken out of LIDO AOS automated environment and therefore no final re-optimisation calculation performed on this flight – out of date info, inaccurate fuel burn figures

- > Crew report at 0430 and retrieve Flight Plans for all operating sectors

- > DSNA issue level cap candidate flights at 0445
- > Flight Dispatcher manually amends Flight Plan as per requirement (5-10 mins)
- > Done at a time when the operation is waking up with multiple other requests coming in
- > Communicate change to the crew, who have now left the crew room.....

Flight plan revision procedure – paper briefing packs

2017-11-22



Predictability challenges

- > Can the airspace accommodate the AOs schedules?
- > The Predictability Conundrum. @ D-1 I don't know where I'm going and you don't know where I'm going
- > Until now, route selection based purely on OFP efficiency. Minimum cost/fuel burn. No consideration of airspace capacity/bottle necks
- > Educated guess work by ANSPs
- > Shifting priorities – reduce OFP efficiency, increase operational efficiency
- > Proactive Vs Reactive
- > Scenario/DSNA Cap/Hot Spots – building them into the flight planning system
- > Analysis of our own delay data and routing accordingly

City Pair	Sum of Delay
EZY64CV	
Weather	1320
ATC Capacity	1276
ATC Staffing	180
ATC Routeing	27
Total	2803

- > Avoid repetitive work for Dispatchers/consistently filing through a hotspot
- > Better OTP for us, better predictability for you around hotspots

Atfm attributed delays s17

- > Why the change of approach?
- > 1% reduction in OTP
- > Demand Vs Capacity constraints increasing with no significant capacity gains on the horizon

- > Slot delays over 60 mins
- > All slot delays S17

Reason	Flight Count	Sum of Delay
Industrial Action (ATC)	276	31874
ATC Capacity	265	21201
ATC Staffing	54	4021
Other	24	2185
Equipment (ATC)	20	1566
Special Event	9	834
Airspace Management	5	373
ATC Routeing	1	136
Total	654	62190

Main reason	Sum of Delay
ATC Capacity	339719
ATC Staffing	94764
Industrial Action (ATC)	47069
Other	11101
Equipment (ATC)	10452
Airspace Management	8858
ATC Routeing	3541
Total	515504

- > The future?
- > You tell us where to go?
- > Flight plan modelling to mirror that of CFSPs for more accurate flow predictions



QUESTIONS?