

*Preliminary data!*

# CYYQ: Weather Assessment for Landing & Alternates

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Calm Air

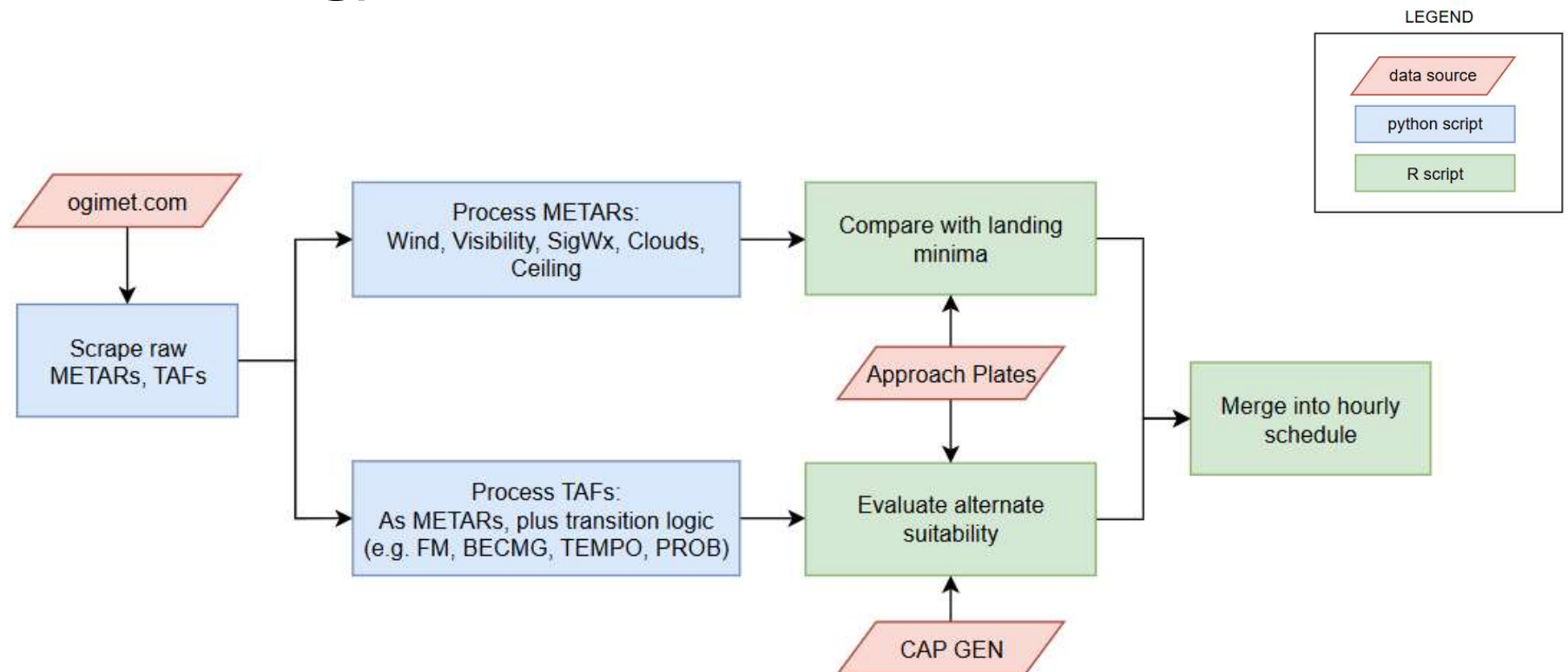
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## Purpose & Scope

- Analysis for the evaluation of a proposed 2-alternate flight planning policy.
- For each hour in the analysis period:
  - Could we land in YYQ?
    - METAR above landing minimums (visibility  $\geq$  Ops Spec, ceiling  $>$  minimums)?
  - Which 2 alternates were available?
    - Used TAFs issued 3+ hours before arrival
    - Forecast above alternate weather minimums (CAP GEN rules)
    - Options: CYGX, CYTH, CYYL, CYNE, CYQD

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# Methodology & Data Sources



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## Results: Jan-Oct 2025 (10 months, hourly)

- YYQ METARs were suitable for landing 99% of the time
- Fractional availability per alternate:

Aerodrome	CYGX	CYTH	CYYL	CYNE	CYQD
Available as alt	88%	96%	93%	85%	93%

- Distribution of number of simultaneously available alternates:

Number of alts	Count	frac
1	168	2%
2	490	7%
3	1,466	20%
4	2,157	30%
5	2,960	41%



*2+ alternates available 98% of the time.*

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# Sample Datasets

The following sample (**preliminary**) datasets have been provided:

- Oct\_2025\_Processed\_METARs.csv
  - Hourly raw & processed METAR, with landing suitability analysis
- Oct\_2025\_Processed\_TAFs.csv
  - Hourly raw & processed TAFs, with alternate suitability analysis
  - Notation guide:
    - A -> B indicates A BECMG B
    - A (B) indicates A TEMPO B
    - A [B] indicates A PROB B
- Oct\_2025\_Alternate\_Availability.csv
  - Merged dataset

*Preliminary data!*

## Further Work

- Validate results & fix any bugs
- Clean up code
- Expand analysis period: 10+ years of data available
- Scope refinement – what exactly do we want to investigate with this data?
- Related analyses:
  - Seasonality and alternate availability
  - Statistical tables for crosswinds to inform training standards
  - Expanding scope to YRT sked & Freighter ops