# NFL25 Agent — Millions Pass‑Off & Handover (v1)

**Owner:** Spencer · **Project:** NFL25 Agent · **Scope:** Millions (with Survivor linkage)

This is your end‑to‑end handoff. It documents what we built, where every value comes from, how to run it, how it interacts with Survivor, what changed during the session, and the next 7‑day plan. It’s written for clarity (step‑by‑step, copy‑paste commands) so you can reproduce everything quickly.

## 0) What we shipped tonight

* **DVOA projections wired for Week 1** (preseason mode):
  + File `` normalized and joined to the Millions planner.
  + Auto‑detects columns **Team / Total DVOA / Off DVOA / Def DVOA / ST DVOA** (case/space tolerant).
  + Converts percent strings to decimals (e.g., 13.4% → 0.134).
  + **Team alias normalization** applied globally (LA→LAR, WAS/WASHINGTON→WSH, JAC→JAX, etc.).
* **Planner join (projections mode)**:
  + scripts/validate\_and\_join\_dvoa.py now supports --projections to write **team\_total\_dvoa\_proj / opp\_total\_dvoa\_proj** (and optionally **dvoa\_diff\_proj** if enabled) to ``.
* **Alias registry** upgraded:
  + `` updated (includes LA/LAR, WSH/WASHINGTON, JAC/JAX, legacy codes like GNB/KAN/SDG/STL/OAK).
  + Utility `` cleans the planner in‑place so Survivor + Millions use the same codes.
* **Survivor linkage intact**:
  + Millions reads Survivor’s expanded roadmap **read‑only** (schedule, current spreads, rest, etc.).

## 1) How Millions relates to Survivor

**Single source of truth** for schedule and current lines remains `` (generated by Survivor). Millions does **not** modify Survivor; it **consumes** the file and adds its own metrics (DVOA projections now; EPA/Circa/Injuries/Weather next).

**Join keys:** team codes normalized via data/seeds/team\_aliases.csv so both tools share the same canonical abbreviations.

**Outputs:** Millions produces weekly/all‑weeks CSVs and (soon) a Member HTML export. Survivor continues its own exports independently.

## 2) Repository layout (effective now)

/project-root/  
 config/  
 millions.json # contest knobs (optional)  
 data/  
 dvoa/  
 2025\_dvoa\_projections.csv # W1 projections (in use now)  
 dvoa\_weekly\_latest.csv # placeholder for W1+ weekly file when available  
 seeds/  
 team\_aliases.csv # alias registry (updated tonight)  
 picks/  
 survivor/  
 survivor\_roadmap\_expanded.csv # upstream source (read-only in Millions)  
 millions/  
 millions\_planner.csv # working planner (we joined projections into this)  
 millions\_roadmap\_game.csv # (builder output; all weeks, planned)  
 millions\_weekly\_games.csv # (builder output; per week, planned)  
 diagnostics/  
 millions\_week\_audit.md # (audit output, planned)  
 scripts/  
 validate\_and\_join\_dvoa.py # JOIN: planner ↔ DVOA (now supports --projections)  
 patch\_normalize\_aliases.py # NORMALIZE: planner teams/opponents by alias registry  
 # (planned) millions\_build\_game\_view.py, millions\_audit\_week.py, millions\_export\_member\_html.py

## 3) Runbook (copy‑paste)

Activate your venv if needed:

.\u005cvenv\Scripts\Activate.ps1

### A) Normalize planner team codes (one‑time or after alias edits)

python -m scripts.patch\_normalize\_aliases \  
 --planner picks/millions/millions\_planner.csv \  
 --aliases data/seeds/team\_aliases.csv

### B) Join **projections** to the planner (preseason / Week 0)

python -m scripts.validate\_and\_join\_dvoa \  
 --season 2025 \  
 --week 0 \  
 --planner "picks/millions/millions\_planner.csv" \  
 --dvoa "data/dvoa/2025\_dvoa\_projections.csv" \  
 --aliases "data/seeds/team\_aliases.csv" \  
 --out "picks/millions/millions\_planner.csv" \  
 --projections \  
 --show

*What you should see:* DVOA schema echo, teams=32, preview with team\_total\_dvoa\_proj and opp\_total\_dvoa\_proj populated. If you enable the optional patch (below), you’ll also see dvoa\_diff\_proj.

### (Optional) Add preseason edge column

Inside validate\_and\_join\_dvoa.py, after both home/away merges:

if projections and {"team\_total\_dvoa\_proj","opp\_total\_dvoa\_proj"} <= set(p.columns):  
 p["dvoa\_diff\_proj"] = p["team\_total\_dvoa\_proj"] - p["opp\_total\_dvoa\_proj"]

Re‑run command **B**.

### C) Join **weekly** DVOA once FTN weekly exists (Week ≥ 1)

python -m scripts.validate\_and\_join\_dvoa \  
 --season 2025 \  
 --week 1 \  
 --planner "picks/millions/millions\_planner.csv" \  
 --dvoa "data/dvoa/dvoa\_weekly\_latest.csv" \  
 --aliases "data/seeds/team\_aliases.csv" \  
 --out "picks/millions/millions\_planner.csv" \  
 --show

*Result:* team\_total\_dvoa / opp\_total\_dvoa / dvoa\_diff become the live metrics used by the dashboards.

## 4) What changed during this session

**Code & scripts**

* validate\_and\_join\_dvoa.py
  + Added **projections mode** (--projections) and robust column detection.
  + Percent/decimal parsing + safety clipping.
  + Canonical uppercase + alias normalization applied before join.
  + Optional `` calculation.
  + Debug preview + warnings for unmatched teams.
* patch\_normalize\_aliases.py
  + New helper to overwrite team/opponent fields in the planner using alias registry.

**Data & files**

* data/seeds/team\_aliases.csv — **expanded** to cover LA/LAR and Washington variants (WASHINGTON/WAS/WSH) plus legacy codes (GNB/KAN/SDG/STL/OAK) and nicknames.
* data/dvoa/2025\_dvoa\_projections.csv — confirmed schema and path; now the Week 1 DVOA source.
* picks/millions/millions\_planner.csv — updated rows now include \_proj columns for preseason.

**Process**

* Clear split between **preseason projections** (Week 0) and **weekly live** DVOA (Week ≥ 1), so swapping sources later is a flag change, not a refactor.

## 5) Column lineage (selected fields)

* **team\_total\_dvoa\_proj / opp\_total\_dvoa\_proj**: from data/dvoa/2025\_dvoa\_projections.csv → normalized → alias map → left‑join by team/opponent.
* **dvoa\_diff\_proj (optional)**: team\_total\_dvoa\_proj − opp\_total\_dvoa\_proj.
* **team\_total\_dvoa / opp\_total\_dvoa / dvoa\_diff** (Week ≥ 1): from data/dvoa/dvoa\_weekly\_latest.csv (FTN weekly) → normalized → alias map → join.
* \*current\_spread\_\*\* / consensus\_spread\*\*: read‑only from Survivor expanded roadmap; Millions just consumes these.
* \*rest\_days\_\*\* / rest\_days\_diff\*\*: read‑only from Survivor expanded roadmap.

(Planned) When we add Circa/EPA/Injuries/Weather, each will trace to a file + script + transform with audit checks.

## 6) Troubleshooting (by symptom)

**NaN DVOA values after join**

* Run the alias patch on the planner.
* Open the DVOA CSV and confirm the *team* text matches an alias (e.g., LA vs LAR; WAS vs WSH).
* Re‑run join with --show to list any unmatched teams.

**Planner shows LA / WAS again**

* Re‑run patch\_normalize\_aliases.py (it’s idempotent).
* Ensure data/seeds/team\_aliases.csv has the mapping you expect; keep all keys UPPERCASE.

**“File not found” for DVOA**

* Confirm the exact path you pass to --dvoa (Windows escaping/quotes).
* If you renamed/moved files, update the path in your saved command.

**PowerShell caret/backtick issues**

* Multi‑line commands must end lines with a backtick ` in PowerShell; if you paste single‑line, remove the backticks.

**Projections show numbers but weekly is blank**

* That’s expected until FTN weekly drops. Use projections (--projections) until then; flip to weekly after Week 1 exists.

## 7) What *you* can do to keep this smooth

* **Keep team codes consistent**: always run the alias patch after changing the planner or the alias file.
* **Archive weekly artifacts**: copy picks/millions/millions\_planner.csv to archive/ after key milestones for audit.
* **Document where you download FTN weekly**: drop to data/dvoa/dvoa\_weekly\_latest.csv every week (same schema).
* **Spot‑check 3–5 games** after each run: spreads present, DVOA magnitudes plausible (±40%), rest diff sensible.

## 8) Next 7‑day sprint (time‑boxed, realistic)

**Day 1 — Member export (HTML)**

* Implement scripts/millions\_export\_member\_html.py: simple per‑game cards with matchup, kickoff, CURRENT line, Circa (— pre‑Thu), Total/Off/Def/ST DVOA, rest diff, status badge.
* Output to picks/millions/member\_week\_1.html.

**Day 2 — Circa Contest ingest**

* Add a PDF→CSV parser writing data/circa\_week\_{W}.csv.
* Merge into builder; compute **line\_value\_current** (current − circa).
* Add audit guardrails.

**Day 3 — EPA team S2D (offense & defense)**

* Build a small ingestor from nflfastR team EPA S2D → data/epa\_team\_s2d.csv.
* Join into Millions, compute epa\_diff\_home/away = off\_epa − opp\_def\_epa.
* Audit range check (−0.3 … +0.3).

**Day 4 — Injuries snapshot (Tue/Thu)**

* Minimal feed → injuries\_key\_home/away (short text: QB (Q), LT (D)).

**Day 5 — Weather snapshot (Thu/Sat)**

* Add weather\_notes (e.g., “Rain 60%, 12 mph” or INDOOR).
* Show on Member export.

**Day 6 — Master dashboard (internal)**

* Private HTML export with power gaps, edges, consensus trends, pick tracking.

**Day 7 — QA & Docs**

* Schema validator (fail fast on missing columns).
* Extend audit markdown with a Provenance Appendix.

## 9) Future (post‑Week 3)

* ATS calibration model (v0.2), then slate optimizer (v0.3).
* Historical tracking: picks/millions/picks\_{year}.csv + CLI to append weekly picks + rationales.
* Automated Circa fetch if source stabilizes.

## 10) Appendix — Command cheat‑sheet

# Activate once per session  
.\u005cvenv\Scripts\Activate.ps1  
  
# Normalize planner aliases (run whenever aliases or planner change)  
python -m scripts.patch\_normalize\_aliases \  
 --planner picks/millions/millions\_planner.csv \  
 --aliases data/seeds/team\_aliases.csv  
  
# Projections join (preseason / Week 0)  
python -m scripts.validate\_and\_join\_dvoa \  
 --season 2025 --week 0 \  
 --planner "picks/millions/millions\_planner.csv" \  
 --dvoa "data/dvoa/2025\_dvoa\_projections.csv" \  
 --aliases "data/seeds/team\_aliases.csv" \  
 --out "picks/millions/millions\_planner.csv" \  
 --projections --show  
  
# Weekly join (Week ≥ 1)  
python -m scripts.validate\_and\_join\_dvoa \  
 --season 2025 --week 1 \  
 --planner "picks/millions/millions\_planner.csv" \  
 --dvoa "data/dvoa/dvoa\_weekly\_latest.csv" \  
 --aliases "data/seeds/team\_aliases.csv" \  
 --out "picks/millions/millions\_planner.csv" \  
 --show

## 11) Open items & risks

* **FTN weekly DVOA availability** for 2025 is still unknown; projections mode covers Week 1, but we’ll need a fallback (public DVOA snapshots or alternate vendor) if weekly lags.
* **Circa source format** may vary weekly; build a tolerant parser (PDF or CSV).
* **Alias drift** from external sources; extend team\_aliases.csv on first miss and keep planner normalized.

**End of v1** — Use this doc as your starting point for the new chat. Copy the commands, run them, and we’ll layer Circa/EPA/Inj/Weather next.