

PayPal Integration & Historical Reconciliation

An overview of the public transactions API, and the project to recover, enrich and clean fifteen years of PayPal donation history using APOPO's NAV export — for anyone who needs the shape of this work without reading the code.

Prepared 17 Sep 2026 | Channel: PayPal (Old Web. + Legacy) | Live at stats.apopo.org | Endpoint /api/v1/transactions

01 · OVERVIEW

Where PayPal donation data stood, and where it stands now

PayPal's own API only exposes three years of transaction history. Everything older than 2023-08-20 was invisible to the dashboard and to the public API — until it was recovered from an internal accounting export (NAV) that APOPO's Odoo integration already relies on. That recovery, plus an enrichment pass to attach the animal/project each PayPal gift actually funded, is what this report covers.

145,003 PayPal transactions in the dashboard	2011–2026 Continuous monthly coverage, no gaps	127,204 Rows matched to a NAV product / animal (88%)	7,266 Distinct donors identified by email
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02 · DATA COVERAGE

Transactions per year

PayPal's Search API only ever covers 2023 onward. Everything else was reconstructed from NAV's ledger export — which is also why 2017–2018 look thin: donation volume on this channel genuinely dropped in that window, it isn't a gap in the recovery.

Year	2011	2012	2013	2014	2015	2016	2017*	2018*
Txns	3,279	3,314	3,638	5,969	6,871	4,449	2,808	2,792

Year	2019	2020	2021	2022	2023	2024	2025	2026**
Txns	7,053	11,491	13,262	13,786	13,641	18,538	20,652	13,460

*2017–2018: the two lowest years on record — a genuine dip in donor volume, confirmed against the source ledger, not a data artifact.
**2026 is partial, through Sep 15.

03 · HOW IT WAS BUILT

Two data sources, reconciled into one table

PayPal's own API is the primary, live source for anything in the last three years. NAV — the accounting export already used for the Odoo integration — is the only source that goes back further, and separately the only place project/animal information for PayPal gifts exists at all, since PayPal's API never returns it.

1. Live sync PayPal Transaction Search API, fields=all. Captures donor identity + recurring markers. Hard 3-year window.	2. Historical backfill NAV export, single-line & real-currency rows only, back to 2013-06-22. 51,469 rows recovered.	3. Currency inference Remaining currency-unknown rows, back to 2011. Country-based, validated, 34,394 rows.	4. Project enrichment Two NAV passes attach product/animal + subscription no. 127,204 rows matched.
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Project enrichment runs in two passes because NAV records the same information in two places with different reliability: the transaction's own line (free text, e.g. "RECURRING DONATION MONTHLY") and the subscription master table (a controlled list of 19 product codes). The second pass overrides the first wherever a subscription number is known, since it's the cleaner source — confirmed live that 1,652 subscriptions actually fund more than one distinct animal over their lifetime, in which case both are recorded, comma-joined, rather than dropped.

04 · CURRENCY INFERENCE

Filling the currency gap without guessing per-country

Just over half of NAV's older rows have no recorded currency at all. The obvious fix — assume each donor paid in their home country's currency — was tested against 44,000+ real rows and rejected: Germany donors are 95.7% USD, not EUR; Belgium 96.9% USD. This is a USD-denominated platform, not a local-currency one.



Accepted tradeoff, not a guess

Currency is defaulted to USD only for countries with $\geq 95\%$ USD purity across ≥ 30 known rows (29 countries qualify; UK/GB/CH/IT/IE/MX/GG/HK/AT explicitly excluded — each has real, material non-USD usage). Expected accuracy across the recovered population: **~97.2%**, i.e. roughly 1 in 36 rows may carry the wrong currency. Every such row is flagged `currency_inferred = true`, so the tradeoff stays visible and reversible.

73,108 older rows were left out of this recovery entirely — either their donor's country isn't in the safe list, or no country was recorded at all. Those stay unrecoverable rather than risk a silent wrong amount.

05 · DATA QUALITY

What was deliberately excluded, and one bug caught in review

NAV's export wasn't built to be a transaction ledger for this purpose, so a conservative rule ran throughout: when in doubt, leave the row out rather than risk a wrong figure in real revenue reporting.

Situation found in NAV	Decision	Rows
One PayPal transaction split across multiple NAV ledger lines (installment/recognition splits)	Excluded	5,799
No currency code, donor's country has no reliable USD-purity signal	Excluded	73,108

No currency code, but donor's country is $\geq 95\%$ USD-pure	Recovered, flagged inferred	34,394
Real currency code, single unambiguous ledger line	Recovered	51,469

OK

Caught in production review: \$0 ghost transactions

A subset of NAV rows are non-monetary void/placeholder ledger lines with a genuine Gross Amount of 0 — the first backfill only filtered out null, not zero, so 2,740 of them were imported as if they were real \$0 donations. Spotted via the Live Transactions feed, root-caused, fixed in both backfill scripts, and removed from production and dev. Current data: zero rows with a \$0 amount.

06 · KNOWN LIMITS

What this integration still can't tell you

- **PayPal's own subscription ID** (I-.../B-...) only exists for rows synced live from the API — it cannot be recovered for any pre-2023-08-20 row, backfilled or not. NAV's own subscription number (nav_subscription_no) is the identifier available for historical rows, and is a separate namespace.
- **project_code** stays UNDESIGNATED for PayPal in the public API — NAV's product codes map to the spec's project_name field instead, since they're free-text/not a stable coded identifier. Still an open item with Odoo.
- **Website vs. old-website PayPal traffic** can't be distinguished from NAV alone — investigated, no reliable signal exists in the export.
- **2011–2012 donor country/currency purity** is accepted as a residual gap; these years simply predate reliable country capture in NAV for some donors.

Data: PayPal Transaction Search API + APOPO NAV export (PayPal.xlsx, NAV Subscription.xlsx) | Verified live against stats.apopo.org and the production database