

AuroraPFM — Internal Project & Finance Management System

Product: AuroraPFM v9.4.0 (“Obsidian”) — Build `apfm-2025.08.15-obsidian-rc3`

Environments: DEV (teal pill), UAT (violet pill), PROD (gold pill) — shown in the top-right header

Operating Regions: NAO (North America Ops), EME (Europe & ME), APC (Asia Pacific & China)

Currency Mode: Tri-currency (Local / Group USD / Contract) with end-of-day FX fix

Data Class: Internal – Financial (retain per §22)

Do Not Distribute Externally

0) What AuroraPFM Is (for users)

AuroraPFM governs the **project lifecycle** and **money flow** end to end: **Idea** → **Initiation** → **Baseline Budget** → **Procure-to-Pay** → **Time & Expenses** → **Forecasts** → **Accruals** → **Closeout**. It integrates with HR (rates and org), Procurement (PO/GRN), AP (invoices), and the GL.

Golden flow: Project → Budget Baseline → Requisitions/POs → Receipts → Invoices → Time & Expense → Forecast → Accruals → Controller Close

1) Navigation & Page Anatomy

1.1 Global Header

- **Logo** (click → **My Workspace**)
- **Environment Pill** (DEV/UAT/PROD) + **Region Chip** (e.g., `PROD` · `EME`)
- **Global Search** (🔍/Ctrl+K): Project Code, PO, Invoice, TE (time entry), CR (change), Vendor
- + **New**: Project, Requisition, Time Sheet, Expense Report, Change Request

- **Period Chip:** **OPEN:** 2025-08 or **CLOSE IN:** WD+3 (shows working day counters)
- **Notifications (bell):** approvals, SLA nudge, close blockers
- **Profile:** Preferences, Delegations, Sign out

1.2 Left Rail (role-aware modules)

1. **Portfolio** (programs, projects, KPIs)
2. **Projects** (initiation, budgets, changes, artifacts)
3. **Time** (entry, approvals, calendars)
4. **Expenses** (reports, policies)
5. **Requisitions**
6. **Purchase Orders**
7. **Receipts (GRN)**
8. **Invoices**
9. **Forecasts**
10. **Close** (accruals, FX, capitalization, certification)
11. **Reports** (dashboards, exports)
12. **Admin** (roles, rates, rules, integrations, feature flags)

1.3 Footer Telemetry

- Build ID, Tenant (**TEN-5932**), Region, Queue Depth **qd:**, Job Lag **lag:**, FX Source **fx:** (e.g., **ECB-17:00Z**), Last GL post **gl:** timestamp

2) Roles, Permissions & Segregation of Duties (SoD)

Role	Can Do	Cannot Do
POW — Project Owner	Create/modify project, draft budgets & CRs, submit for approval	Approve own CR or invoices
PAC — Project Accountant	Postings, reclasses, accruals, reconciliations	Approve POs > their limit
RSM — Resource Manager	Approve team time sheets	Post invoices
APP — Approver	Approve budgets/CRs/requisitions within limit	Post journals
PRC — Procurement	Convert REQ→PO, manage vendors, issue change orders	Approve budget baselines
APC — AP Clerk	Match & post invoices/credits	Approve POs
CTR — Controller	Period close, FX reval, capitalization, sign-off	Create projects
PTD — Portfolio Director	Program oversight, stage gates	AP postings
AUD — Auditor (read-only)	View everything, export audit	Any write action
SAD — System Admin	Admin config	—

SoD Hard Rules

- Requester ≠ Approver ≠ Poster on the same financial artifact.
- Dual approval for POs > **\$25,000** (APP + CTR), and CR budget delta > **\$50,000** (PTD + CTR).
- AP Poster cannot be the same user who raised the Requisition.

3) Codes, Numbering & Statuses (RAG-targeted)

- Project Code: PRJ-ALPHA-#### (e.g., PRJ-ALPHA-1024)

- **Work Package:** WP-PRJCODE-## (e.g., WP-PRJ-ALPHA-1024-03)
- **Task:** TSK-####
- **Requisition:** REQ-YY-#### (e.g., REQ-25-01873)
- **PO:** PO-YY-####
- **GRN (Receipt):** GRN-YY-####
- **Invoice:** INV-VEND-####
- **Credit Note:** CRN-VEND-####
- **Time Entry:** TE-YYYYMMDD-USER
- **Expense Report:** EXP-USER-YYYYWW
- **Change Request:** CR-PRJCODE-##
- **Forecast Batch:** FRCST-YYYYMM-PRJCODE
- **Journal:** JRNL-YYYYMM-####

Project Statuses: DRAFT → INITIATED → BASELINED → IN_EXECUTION → ON_HOLD → CLOSED → ARCHIVED

Financial States: UNBUDGETED / BUDGETED / COMMITTED / ACTUALIZED / OVERRUN

4) Project Creation & Initiation

4.1 New Project Wizard (5 steps)

1. **Identity:** Name, Project Code (auto-suggest), Portfolio, Program, Owner (POW), Dates, Location
2. **Financial Dimensions:** CostCenter, Account, ProjectCode, TaxCode, Location

3. **Funding:** Capex/Opex split targets, Funding Source (e.g., **FUND-OPS-2025**)
4. **Team:** Resource roles (**ENG-SR**, **PM**, **ANL**) + rate cards (regional)
5. **Artifacts:** Charter PDF (required), Risk register seed (optional)

4.2 Initiation Gate

- Submit to **PTD** for **Initiation Approval**; once approved → status **INITIATED**
 - You can now create **Budget v1** (baseline candidate)
-

5) Budgeting & Baselines

5.1 Budget Editor

- Grid with lines: Category, Description, Qty, Unit, Unit Cost (Contract/Local), Capex Flag, Tax Code, Delivery Month, Work Package, Vendor (optional)
- Attach quotes; mark dependencies.

5.2 Baseline Rules

- First approved budget = **Baseline v1** (**BV-PRJCODE-v1**)
- Any change after baseline must go through **Change Request** (no direct baseline edits)
- **Tolerance Bands:**
 - Line variance $\pm 10\%$ auto-allowed
 - Project variance up to **+5%** requires **CTR** approval
 - **+5%** requires **CR** + **PTD** decision

5.3 Versioning

- Subsequent approved budgets labeled **BV-PRJCODE-v2**, **v3**, ... with diff report (line adds, deletes, deltas)
-

6) Procure-to-Pay (P2P)

6.1 Requisition (REQ)

- Fields: Project, WP, Vendor (or Tender), Items (Qty/Unit/Price/Tax), Need-by, Delivery terms (Incoterms), Attachments (quote), Approver route
- Submit → **APP** approval → **PRC** converts to **PO**

6.2 Purchase Orders (PO)

- Numbering **PO-YY-#####**; multi-currency allowed (Contract Currency)
- **Change Orders** permitted with delta track
- **Dual approval** if PO total > \$25k

6.3 Receipts (GRN)

- Partial or full; evidence (delivery note) upload; tolerance window **±2 units** for qty
- GRN triggers **Committed** → **Actualized** shift if invoice follows

6.4 Invoices (INV)

- **3-way match** (PO = GRN = INV); tolerances: **price ±5%** or **qty ±2 units**
- Exception routes to **PAC** or **CTR**
- Tax calculated by **Tax Engine** using **TaxCode** and Location

6.5 Postings

- On approval, **APC** posts to GL with dimensions (Project, WP, CostCenter, Account, TaxCode, Location)
-

7) Time & Expenses

7.1 Time

- Daily or weekly sheets; submit by **Monday 12:00 local**
- **RSM** approves; lock at **T+14 days** (unless **CTR** unlocks period)
- Roles & Rates: effective-dated (**ENG-SR**, **PM**, **ANL**, etc.)
- Overtime requires **Reason Code** (**OT-CLIENT**, **OT-INCIDENT**) and **APP** pre-approval

7.2 Expenses

- Policy-driven categories (Travel, Software, Lab, Misc)
 - Per-diem rules and receipt requirement; foreign currency captured at transaction date; EOD FX used for posting
 - Audit picks random **5%** for review monthly
-

8) Forecasting & Accruals

8.1 Forecasts (monthly)

- Batch **FRCST-YYYYMM-PRJCODE**: ETC (estimate to complete) per WP
- **Forecast Accuracy KPI** (last 3 months): target **±8%**

8.2 Accrual Engine

- If services delivered but no invoice by **WD+2** → **auto-accrue** based on PO schedule
- Auto-reversal on **WD+5** next month
- Accrual journal **JRNL-YYYYMM-####** with justification

8.3 FX Revaluation (multi-currency)

- Nightly FX fix; month-end **revalue open commitments and payables** to Group USD; gains/losses hit FX accounts

9) Change Requests (CR)

- Types: **Scope, Schedule, Budget, Resource**
- Fields: delta budget, delta days, justification, risk, alternatives, affected WPs
- Approval: **APP** (owner's chain) + **CTR** if > +5% variance; **PTD** if > \$50k or > 30 days delay
- On approval, budget version increments; diff report attached

10) Dashboards & KPIs

- **Portfolio Heatmap**: CPI & SPI with red/yellow/green
- **Budget Consumption**: Baseline vs EAC vs Actuals
- **Open POs Aging**: target < **45 days**
- **Invoice Cycle Time**: target < **10 days**
- **Time Compliance**: submissions before Monday noon → target > **95%**
- **Forecast Accuracy (L3M)**: target **±8%**

11) Close (Month-End)

Close Checklist (wizard with auto-validation):

1. **Lock Time** (T+14) and **Expenses posted**
2. **Receipts**: outstanding GRNs resolved
3. **Accruals**: run engine; review exceptions
4. **FX Revaluation** complete
5. **Capitalization** (capex lines → assets)
6. **Variance Analysis** (explain > ±5% vs baseline)
7. **Controller Certification** (e-sign)
8. **Period Close** → **CLOSED: 2025-08** (reopen requires **CTR** + **SAD**)

12) Admin — Settings, Rates, Rules, Feature Flags

12.1 Rate Cards

- Regional (NAO/EME/APC) with role codes; effective-dated matrices

12.2 Approval Rules

- Dynamic chains by amount, category, and region
- SoD checks enforced pre-submit

12.3 Tolerances & Policies

- PO price ±5%, GRN qty ±2 units, Time lock **T+14**, Dual approvals thresholds

12.4 Integrations

- **Directory** (OIDC) hourly delta;
- **ERP/GL** postings via `gl.post` topic;
- **Procurement Network** for vendor onboarding;
- **Tax Engine**;
- **FX Feed** (`ECB-17:00Z` or regional)

12.5 Feature Flags

- `ff.dual_approval_po_25k` (default on)
- `ff.cr.dual_approval_50k`
- `ff.tri_currency_contract`
- `ff.time.strict_lock`
- `ff.expense.audit5pct`
- `ff.ap.match.strict` (blocks posting if 3-way mismatch)

13) Background Jobs & Schedules

- `job.fx.fix` — daily 17:05Z; loads FX and revalues staged items
- `job.accruals.generate` — WD+2 02:00 local; creates accrual suggestions
- `job.accruals.reverse` — WD+5 02:00 local
- `job.gl.post` — every 15m; posts approved artifacts to GL

- `job.audit.seal` — daily; seals prior-day audit records (hash chain `APFM-CHAIN`)
 - `job.kpi.refresh` — hourly; recomputes dashboards
 - `job.period.sanity` — nightly; flags close blockers
-

14) Page-Level Details & UI Strings (RAG-friendly)

14.1 Project → Summary

- **Tiles:** Status, Baseline v#, Budget vs EAC, CPI, SPI, Open POs, Invoices pending
- **Buttons:** **Submit for Baseline**, **New CR**, **Export Pack**, **Archive**

14.2 Budget Editor

- **Row menu:** Duplicate line / Split to WP / Move to Capex / Attach Quote / Notes
- **Banner:** “Lines changed since last save” (autosave countdown 30s)

14.3 Requisition Form

- **Fields:** Vendor, Contract Currency, Delivery Terms, Need-by, Items grid
- **Validation:** Missing quote → `REQ-VAL-210`
- **Submit** → route shows avatar chips of approvers

14.4 Invoice Matching

- **Tabs:** Header | Lines | Match | Taxes | Attachments
- **Match panel** shows PO/GRN side-by-side; discrepancies highlighted amber/red

14.5 Close Wizard

- Step chips with green checks; blockers appear with “Fix” links (jumps to module)

15) Error Codes & Messages (surface to users; internal cause)

Code	User Message	Internal Cause	Resolution
PRJ-VAL-101	“Project Code invalid (PRJ-ALPHA-####).”	Regex fail	Use suggested code
BV-LOCK-403	“Baseline locked. Use a Change Request.”	Attempt to edit baseline	Create CR
REQ-VAL-210	“Quote attachment required.”	Policy	Attach PDF/IMG
PO-APP-250	“Dual approval required (> \$25k).”	Threshold hit	Route to CTR
GRN-214	“Qty variance exceeds tolerance.”	> 2 units	Raise exception
INV-MCH-302	“3-way match failed.”	PO/GRN mismatch	Correct GRN or PO
TIME-LOCK-423	“Time entry locked (T+14).”	Past lock window	Request unlock
FRCST-VAL-207	“ETC cannot be negative.”	Data entry error	Fix ETC line
ACC-401	“Accruals blocked by missing GRN.”	No receipt	Post GRN
FX-PIPE-500	“FX feed unavailable.”	Upstream outage	Retry after fix
GL-POST-409	“Posting conflict (duplicate).”	Same doc posted	Re-run with new doc no

16) Data Model (selected objects)

Project

- `code (PK), name, owner, portfolio, program, status, start, end, baseline_budget, eac, cpi, spi, capex_pct, artifacts[]`

WorkPackage

- `id, project_code, desc, budget, forecast, etc, capex_flag`

Requisition

- `req_no (PK), project_code, wp_id, vendor, currency, lines[], need_by, approvals[], status`

PO

- `po_no (PK), vendor, currency, lines[], tax, status, approvals[], change_orders[]`

GRN

- `grn_no (PK), po_no, lines[], evidence, posted_ts`

Invoice

- `inv_no (PK), po_no, grn_no, amount, tax, currency, match_status, status, posted_ts`

TimeEntry

- `te_id (PK), user, date, hours, wp_id, rate_code, status, approved_by`

ChangeRequest

- `cr_id` (PK), `project_code`, `type`, `delta_budget`, `delta_days`, `risk`, `decision`, `approvals[]`
-

17) Synthetic API (internal)

POST `/aurora/v1/projects`

GET `/aurora/v1/projects/{code}`

POST `/aurora/v1/requisitions`

POST `/aurora/v1/purchaseorders`

POST `/aurora/v1/invoices/match`

POST `/aurora/v1/forecast/{project_code}/submit`

POST `/aurora/v1/close/{period}/run`

Event Topics

- `gl.post`, `ap.invoice.posted`, `po.created`, `grn.posted`, `forecast.submitted`, `close.blocker`, `close.completed`
-

18) Keyboard Shortcuts & Power Tips

- Global search: `⌘/Ctrl+K`
 - New CR: `c` then `r`
 - Approve focused artifact: `a` / Reject: `x`
 - Open My Approvals: `g` then `m`
 - Jump to Close: `g` then `c`
 - Budget quick add line: `+` (when grid focused)
-

19) Accessibility & Mobile

- WCAG 2.2 AA components; high-contrast theme toggle in **Profile** → **Preferences**
 - Mobile approvals: **My Approvals** provides one-tap Approve/Reject with comment
 - Time & Expenses fully mobile-friendly
-

20) Reports & Exports

- **Portfolio Pack** (PDF): executive summary, burn chart, risks, open POs aging
 - **Finance Export** (CSV): `doc_no`, `project_code`, `wp_id`, `cost_center`, `account`, `amount_local`, `amount_usd`, `tax_code`, `posted_ts`
 - **Audit Extract** (JSONL): daily hashed records (see `APFM-CHAIN`)
-

21) Troubleshooting Playbooks

21.1 “I can’t submit baseline (button disabled)”

- Ensure status = `INITIATED`, all budget lines valid, charter attached; then submit to `APP`.

21.2 “Invoice won’t match”

- Check PO line units vs INV; correct GRN quantity; re-run match panel; if price variance >5%, raise exception to `PAC`.

21.3 “Time entry locked”

- Period > T+14; request temporary unlock from `CTR`. Add reason in comment.

21.4 “Forecast not saving”

- ETC negative on one line; editor shows red cell; fix and re-submit batch.

21.5 “Close blocked at Accruals”

- Run **Accrual Engine**; resolve exceptions; re-check Close wizard.
-

22) Security, Audit & Retention

- **SSO (OIDC)** with Conditional Access; per-module RBAC & row-level security by region
 - **SoD** enforced at submit time; violations get blocked with code **SOD-409**
 - **Audit**: every edit **who/when/what before/after**; sealed daily by **job.audit.seal**
→ **APFM-CHAIN**
 - **Retention**:
 - Projects & Baselines: **7 years** after Close
 - Financial artifacts (PO/INV/GRN/Journals): **7 years**
 - Time & Expense: **5 years**
 - Close packs & certifications: **7 years**
-

23) Paste-Ready Internal Snippets (no links)

Requisition Approval Nudge

REQ-{{no}} for **{{vendor}}** ({{amount}} {{currency}}) awaiting your approval.
Project **{{project_code}}**. Need-by **{{date}}**. Please approve/reject with a short comment.

Close Blocker Notice

Period `{{period}}` blocked: **Accruals pending** on `{{project_code}}`. Run Accrual Engine and resolve exceptions, then retry Close.

CR Decision Template

Decision: **Approved**. Budget delta `$42,500` (WP-PRJ-ALPHA-1024-03). Schedule impact: `0 days`. Risk: **Low**. Justification: compliance reporting scope. Effective immediately.

24) Release Notes — v9.4.0 “Obsidian”

- Tri-currency contract pricing with end-of-day FX roll
 - Close wizard with live blockers & “Fix” deep-links
 - Dual approval toggle for CRs > \$50k (feature flag)
 - New KPI: Last-3-Month Forecast Accuracy
 - API: `/close/{period}/run` and `forecast.submitted` topic
 - Accessibility: high-contrast theme and keyboard focus rings
-

25) Glossary (AuroraPFM-specific)

- **Baseline**: first approved budget version (`BV-...-v1`)
- **EAC**: Estimate at Completion
- **ETC**: Estimate to Complete
- **Three-way match**: PO = GRN = Invoice
- **T+14 Lock**: time entry lock 14 days after work date
- **WD+2 / WD+5**: working day counters used by Accrual Engine
- **CPI/SPI**: cost/schedule performance indices

