**📄 Draft BRSD Section: Purchase Orders & Payments**

**1. Purchase Order Creation**

**Description:**  
A Purchase Order (PO) is the official request from the business to a supplier to provide goods or services under agreed terms.

**Functional Requirements:**

* The system shall allow creating a PO with the following key fields:
  + Supplier (mandatory)
  + PO number (auto-generated with configurable sequence)
  + Date
  + Payment Terms (X days)
  + Items (product/service, description, unit price, quantity, discount, taxes)
  + Additional charges (shipping, adjustments)
  + Attachments (scanned supplier quotes, contracts, etc.)
  + Notes/Terms (editable text)

**2. Discounts & Adjustments**

* The system shall allow applying discounts either as:
  + Percentage (%) discount on total
  + Fixed amount discount
* Adjustment shall affect the net payable amount before tax calculation.

**3. Deposits & Advance Payments**

**Business Logic:**  
Sometimes the business pays part of the PO upfront (deposit), or even fully pays before receiving goods.

**Functional Requirements:**

* The system shall allow entering an **Advance Payment/Deposit** at PO creation.
* Deposit entry fields:
  + Amount / Percentage
  + Payment method (cash, bank transfer, cheque, credit card, etc.)
  + Reference No. (bank slip / cheque number / transaction ID)
  + Checkbox: “Already Paid” (to mark if deposit has been cleared)
* The system shall deduct the deposit from the total payable balance when the invoice is finalized.
* Full payment can also be recorded in this section (100% deposit).

**4. Shipping & Charges**

* The system shall allow defining:
  + Shipping fees (fixed value)
  + Shipping tax (selectable from tax list)
* Shipping charges are added to the PO total.

**5. Attachments**

* The system shall allow attaching files (PDF, images, Word docs).
* Attachments may be:
  + Uploaded directly
  + Linked from previously uploaded documents.
* Attached documents are stored in the system and linked to the PO record.

**6. Approval & Workflow**

* POs can be saved as **Draft** until reviewed.
* POs must go through an approval process before being sent to suppliers (workflow configurable).
* Once approved, a **PO PDF layout** is generated to share with supplier.

**BRSD Addition — PO Status Model**

**Requirement:**  
Each PO record must maintain three distinct status dimensions, updated independently but visible together for clear tracking:

* **Reception Status** → updated by goods receipt or return transactions.
* **Payment Status** → updated by supplier payment records, deposits, or refunds.
* **Document Status** → controlled by workflow actions (draft, approval, cancellation, closure).

**Business Rules:**

* A PO cannot move to **Closed** unless:
  + Reception Status = Fully Received
  + Payment Status = Paid in Full
* Cancelling a PO automatically locks Reception & Payment (no further transactions).
* Refund creation updates both Payment Status and Reception Status if linked to returned goods.

 **Reception Status (Goods/Services Delivery)**

* Draft (not received yet)
* Partially Received (some items delivered)
* Fully Received (all items delivered)
* Returned (if all goods were sent back)

 **Payment Status (Financial Settlement)**

* Unpaid
* Partially Paid (deposit or partial settlement)
* Paid in Full
* Refunded (if supplier refunded the payment)

 **PO Document Status (Lifecycle / Business Control)**

* Draft
* Submitted / Sent to Supplier
* Approved
* Closed (both goods received & fully paid)
* Cancelled (before or after approval)
* **Purchase Order Status Matrix**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Reception Status | Payment Status | Document Status | Operational Meaning / Allowed Actions |
| 1 | Not Received | Unpaid | Draft | PO being prepared. Edit all fields; no postings. |
| 2 | Not Received | Unpaid | Submitted | Sent to supplier; awaiting approval or goods. Allow cancel. |
| 3 | Not Received | Partially Paid | Submitted/Approved | Deposit recorded; no receipt yet. Allow receive or cancel (with refund). |
| 4 | Partially Received | Unpaid | Approved | Some items received; create further receipts or returns. Payment still due. |
| 5 | Partially Received | Partially Paid | Approved | In progress both sides. Allow more receipts/returns/payments. |
| 6 | Partially Received | Paid in Full | Approved | Prepaid; balance of items pending. Allow further receipts/returns (may create refund). |
| 7 | Fully Received | Unpaid | Approved | Goods fully in; trigger payment due. Allow payments/returns. |
| 8 | Fully Received | Partially Paid | Approved | AP outstanding; continue payments. |
| 9 | Fully Received | Paid in Full | Approved | Operationally complete; candidate for **Close**. |
| 10 | Any (no open qty) | Refunded | Approved | Supplier refunded after prior payment (usually with returns). Locks further payments. |
| 11 | Returned (all) | Unpaid | Approved | Entire receipt reversed; optionally **Cancel** or **Close** with zero liability. |
| 12 | — | — | Cancelled | Admin stop. No further receipts/payments; only view/audit. |
| 13 | — | — | Closed | Final state: Reception = Fully Received (or Returned), Payment = Paid in Full (or Refunded). Read-only except audit notes. |

**State Transitions (system-driven)**

* **Goods Receipt posted**
  + Not Received → Partially Received / Fully Received (based on quantities).
  + Auto-updates receipted quantities and inventory.
* **Return posted (via PO-linked Refund)**
  + Reception: decreases received qty; to *Returned* if all reversed.
  + Payment: if previously paid, system creates **Debit Note** linked to the Refund and adjusts to *Partially Paid* or *Refunded*.
* **Supplier Payment posted**
  + Unpaid → Partially Paid / Paid in Full (sum of payments − deposits vs. payable).
* **Deposit recorded (at PO/Invoice)**
  + Payment: Unpaid → Partially Paid.
  + Applied to final invoice automatically.
* **Approval workflow**
  + Draft → Submitted → Approved (per role rules).
* **Close** (manual action or nightly job)
  + Allowed only if: Reception = **Fully Received** *or* **Returned**, and Payment = **Paid in Full** *or* **Refunded**.
  + Sets Document = **Closed**.
* **Cancel**
  + Allowed when no financial/stock postings exist, or after auto-reversal of them (guard rails below).
  + Sets Document = **Cancelled** and locks other statuses.

**Guard Rails & Validation**

* Cannot **Close** while any item has open receive qty or any AP balance > 0.
* **Cancel** after postings requires: reverse receipts, void payments/deposits, and remove liabilities (system-guided wizard).
* A **Refund** must reference the PO (your chosen design); system auto-creates a **linked Debit Note** for accounting.
* Prepayment cases (Payment = Paid in Full, Reception < Fully): allow receipts; if later returned, system issues Refund + Debit Note to move Payment → Refunded.

**1) Happy Path — PO → Deposit → Receive → Invoice → Pay → Close**

sequenceDiagram

autonumber

actor Buyer as Procurement User

participant SYS as System (ERP)

participant INV as Inventory

participant AP as Accounts Payable

actor SUP as Supplier

Buyer->>SYS: Create PO (Supplier, Items, Terms)

SYS-->>Buyer: PO# issued (Document=Submitted/Draft -> Approved)

Buyer->>SYS: Record Deposit (Amount/Method/Ref)

SYS->>AP: Post prepayment (Payment Status=Partially Paid)

SUP-->>Buyer: Deliver goods (partial or full)

Buyer->>SYS: Receive GRN against PO

SYS->>INV: Increase stock by received qty

SYS-->>Buyer: Reception Status -> Partially/ Fully Received

SUP-->>Buyer: Send supplier invoice

Buyer->>SYS: Create Purchase Invoice (linked to PO)

SYS->>AP: Create AP liability (Total - Deposit)

Buyer->>SYS: Add Payment(s) against invoice

SYS->>AP: Post payment, apply deposit

AP-->>SYS: Balance Due hits 0

SYS-->>Buyer: Payment Status=Paid in Full

SYS-->>Buyer: If Reception=Fully Received AND Paid in Full

SYS-->>Buyer: Document Status -> Closed

**Acceptance Criteria**

* Creating a PO generates **PO#** and initializes Reception=Not Received, Payment=Unpaid, Document=Submitted/Approved.
* Deposit posts a **prepayment** and flips Payment=Partially Paid.
* Goods Receipt (GRN) **increments inventory** and updates Reception to Partial or Fully.
* Purchase Invoice creates AP liability **net of deposit**.
* Final payment sets Payment=Paid in Full; when Reception=Fully Received, **Document → Closed** automatically.

**2) Variant — Prepaid + Partial Receipts over time**

sequenceDiagram

autonumber

actor Buyer as Procurement

participant SYS as System

participant INV as Inventory

participant AP as Accounts Payable

Buyer->>SYS: Create PO & record 100% deposit (Already Paid)

SYS->>AP: Post prepayment (Payment=Paid in Full)

loop Multiple Deliveries

Buyer->>SYS: Post GRN for shipment N

SYS->>INV: Increase stock by qty N

SYS-->>Buyer: Reception -> Partially Received (until final)

end

alt Final delivery posted

SYS-->>Buyer: Reception -> Fully Received

SYS-->>Buyer: Document -> Closed (since Payment=Paid in Full)

end

**Acceptance Criteria**

* System supports **multiple GRNs** against a single PO.
* If **deposit = 100%**, Payment Status shows **Paid in Full** from the start.
* On last GRN, PO auto-**closes**.

**3) Return/Refund Path — Refund tied to PO; Debit Note auto-created**

sequenceDiagram

autonumber

actor Buyer as Procurement

participant SYS as System

participant INV as Inventory

participant AP as Accounts Payable

actor SUP as Supplier

Buyer->>SYS: Initiate Refund from PO/Invoice (select lines/qty)

SYS->>INV: Decrease stock by returned qty (if items were received)

SYS->>AP: Create linked Debit Note (auto) & apply to supplier balance

note right of SYS: Debit Note is not standalone UI; appears as a linked accounting document.

alt Prior payments exist > credit due

AP-->>SYS: Supplier balance reduced; if overpaid -> credit/refund

SYS-->>Buyer: Payment Status -> Partially Paid or Refunded

else No prior payments

SYS-->>Buyer: AP liability reduced; Payment may remain Unpaid

end

SUP-->>Buyer: Confirms receipt of returned goods / issues refund

SYS-->>Buyer: Update activity log & statuses accordingly

**Acceptance Criteria**

* **Refund** can only be created **from** a PO/Invoice; it **must reference** it.
* System **automatically generates a linked Debit Note**; users don’t create it manually.
* Inventory decreases on return; AP balance adjusts.
* If AP becomes negative (overpayment), Payment Status becomes **Refunded** and supplier credit is available.

**4) Cancel Flow — Guard-railed**

sequenceDiagram

autonumber

actor Buyer as Procurement

participant SYS as System

participant INV as Inventory

participant AP as Accounts Payable

Buyer->>SYS: Request Cancel PO

alt No postings (no GRN, no payments, no invoice)

SYS-->>Buyer: Document -> Cancelled

else Postings exist

SYS-->>Buyer: Start reversal wizard

SYS->>INV: Reverse GRNs/returns as needed

SYS->>AP: Void payments/deposits & remove liabilities

SYS-->>Buyer: If all reversals succeed -> Document -> Cancelled

end

**Acceptance Criteria**

* **Cancel** only succeeds when all dependent postings are reversed (system-guided).
* After **Cancelled**, PO is **read-only**; Reception & Payment stop accepting new transactions.

**5) Status State Machine (for quick reference)**

stateDiagram-v2

[\*] --> Document: Create PO

Document --> Approved: Approve

Approved --> Closed: (Reception=Fully Received) && (Payment=Paid in Full || Refunded)

Approved --> Cancelled: Cancel (no open postings or after reversals)

Approved --> Approved: Edit minor fields (if permitted)

state Reception {

[\*] --> NotReceived

NotReceived --> PartiallyReceived: Post GRN (partial)

PartiallyReceived --> FullyReceived: Post GRN (complete)

PartiallyReceived --> Returned: Return all received

FullyReceived --> Returned: Return all

}

state Payment {

[\*] --> Unpaid

Unpaid --> PartiallyPaid: Deposit/Payment

PartiallyPaid --> PaidInFull: Additional payments applied

PaidInFull --> Refunded: Refund/Return -> DN/Refund posted

PartiallyPaid --> Refunded: Refund exceeds paid portion

}

**Field/Log Requirements (attach under all diagrams)**

* **Audit trail** must capture: user, timestamp, action, before/after values (statuses, totals, quantities, payments, refunds).
* **Cross-links**: PO ⇄ GRNs ⇄ Invoice ⇄ Payments ⇄ Refund ⇄ Debit Note.
* **Validation**:
  + Refund qty ≤ Received qty per line.
  + Payments (incl. deposit) ≤ Gross total minus refunds.
  + No Close until guard condition satisfied.

**BRSD — Supplier Management**

**1. Add Supplier Form**

**Purpose:** Maintain supplier master records with both business and accounting details.

**Fields:**

* **Supplier Details**
  + Business Name (mandatory)
  + First Name / Last Name (optional for contact persons)
  + Telephone, Mobile
  + Street Address 1, Street Address 2
  + City, State, Postal Code, Country
  + C.R. (Commercial Registration, optional)
  + Tax ID (optional)
  + Option to add **Secondary Address**
  + Option to add **Contact Person(s)** (name, phone, email)
* **Account Details**
  + Supplier Number (auto-generated, mandatory, unique)
  + Currency (default currency, selectable from system currency list)
  + Opening Balance & Opening Balance Date
  + Email
  + Notes (free text for additional info)
  + Attachments (documents, contracts, licenses, IDs)

**Functional Requirements:**

* System shall validate **unique Supplier Number**.
* Business Name is mandatory; all other fields are optional unless configured otherwise.
* Currency must be defined; default system currency applies if none is selected.
* Attachments should support common formats (PDF, image, docx).
* Audit log records **created by, date, and time**.

**2. Supplier Profile & Dashboard**

**Purpose:** Provide a 360° view of each supplier’s financial standing and transactions.

**Sections:**

* **Header**
  + Supplier Name & Supplier Number
  + Ledger Account link
  + Supplier Status (Active, Suspended, Deleted)
  + Balance Due (real-time calculation)
* **Available Actions**
  + Edit Details
  + Create Purchase Invoice (shortcut)
  + Statement (generate account statement PDF/Excel)
  + Add Opening Balance
  + Add Payment Credit (advance payment not tied to invoice)
  + Suspend (temporarily block new transactions)
  + Delete (if no transactions exist)
* **Tabs**
  + **Profile** → General info, attachments, notes
  + **Latest Purchase Invoices** → Quick list of recent invoices
  + **Activity Log** → History of changes & user actions
  + **Transaction List** → Full ledger entries with drill down
* **Account Summary**
  + Opening Balance
  + Total Purchases
  + Paid to Date
  + Balance Due (Total – Paid)
  + Quick Info (count of invoices, due invoices, last invoice ref)

**3. Business Rules**

* Supplier **cannot be deleted** if linked to transactions (only “Suspended”).
* Suspended suppliers block creation of new POs or Invoices.
* Supplier balance = Opening Balance + Purchases – Payments – Refunds.
* Adding a payment credit increases supplier prepayment balance (available to apply later).
* Supplier statements must show: opening balance, transaction history, net payable.

**4. Reporting Requirements**

* Supplier Aging Report: by due date buckets (0–30, 31–60, 61–90, 90+ days).
* Supplier Balance Report: all suppliers with balances (positive = payable, negative = advance/credit).
* Supplier Ledger: detailed drill-down, mirroring GL.