You have the pillars. Now you need the arches that connect them. These aren't new modules; they are the features that make the *connection* between Finance and Inventory feel magical.

**1. The Automated Journal Entry Engine (The Heartbeat)**  
This is the #1 most important integration. You've built the logic; now it needs to be flawless and invisible.

* **Feature:** A real-time, event-driven system that listens for inventory events and automatically posts the corresponding journal entries to the Finance GL.
* **Key Triggers:**
  + **Purchase Order Receipt:** (Debit) Inventory Asset, (Credit) Accounts Payable (or Cash)
  + **Sale/Invoice Created:** (Debit) COGS, (Credit) Inventory Asset (using FIFO/LIFO/Avg Cost)
  + **Inventory Adjustment:** (Debit/Credit) Inventory Adjustment Expense, (Credit/Debit) Inventory Asset
* **Why it's missing:** This is the ultimate test of your stock\_levels and costing logic. The 400 errors on your P&L and Balance Sheet are likely because these automated entries aren't happening, so the reports can't calculate correctly.

**2. The "Cost of Goods Sold (COGS)" Reconciliation Report**

* **Feature:** A dedicated report that sits between the Finance and Inventory modules. It answers the question: "Does the total COGS in my General Ledger match the total cost of the inventory my system says I've sold?"
* **Why it's missing:** This is the single report that builds unshakable trust in your system's data integrity. It proves the numbers are real.

**3. Landed Cost Management**

* **Feature:** A workflow to allocate additional costs (freight, duty, insurance) to received inventory *after* the initial receipt, and automatically adjust the inventory's value and the corresponding journal entries.
* **Why it's missing:** This is an advanced, high-value feature that almost all ERPs struggle with. Nailing it would be a massive competitive advantage.

**4. Financial Dimensions (Multi-Dimensional Accounting) for Inventory**

* **Feature:** The ability to tag any inventory transaction (and its resulting journal entry) with custom dimensions like Project, Department, Cost Center, or Region.
* **Example:** When issuing inventory to a specific construction project, the COGS is automatically tagged to that Project dimension. The P&L can then show profitability by project.
* **Why it's missing:** This is enterprise-grade functionality that moves beyond basic accounting.

Best Integrations/Connections to Implement

Think of these as the "nervous system" that connects the "brain" (Finance) to the "body" (Inventory).

| **From Module** | **To Module** | **Integration Point** | **Purpose** |
| --- | --- | --- | --- |
| **Inventory** | **Finance** | **Auto-Post JE on Goods Receipt** | Records inventory arrival as an asset, creates liability for payment. |
| **Inventory** | **Finance** | **Auto-Post JE on Sale (COGS)** | Matches revenue with its corresponding cost, calculating true profit. |
| **Inventory** | **Finance** | **Landed Cost Adjustment JEs** | Ensures inventory value on Balance Sheet is accurate and includes all costs. |
| **Finance** | **Inventory** | **Payment Status on Purchase Orders** | Shows warehouse staff if a PO is paid before they receive it (helps with fraud prevention). |
| **CRM (Sales)** | **Inventory** | **Real-Time ATP (Available to Promise)** | Allows sales to see live, accurate delivery dates, not just in-stock/out-of-stock. |
| **Inventory** | **CRM (Sales)** | **Shipment Tracking Updates** | Automatically updates the customer and salesperson when an order ships. |
| **Inventory (WMS)** | **HR/People** | **Picker Performance Data** | Links operational efficiency to individual employees for performance reviews and bonuses. |

Your Testing Batch Suggestion:

Add one more critical batch that tests these integrations directly:

**🏗️ Batch 7: Cross-Module Integration Tests**

* POST Create a Purchase Order
* POST Receive the PO against the order -> **Verify a Journal Entry was auto-created in Finance**
* POST Create a Sales Order
* POST Fulfill the Sales Order -> **Verify a COGS Journal Entry was auto-created**
* GET COGS Reconciliation Report -> **Verify Finance GL and Inventory data match**
* GET P&L Report -> **Should now work (Status 200) because the JEs exist**

Your batches are perfect. They've told you exactly where you are. Now, focus on making the **arrows between the boxes** as robust as the boxes themselves. That is where the true power of an ERP is unleashed.