**Project Outline: eCommerce Drop-ship Order Processing Streamlining Application (MVP)**

**1. Project Goal & Vision:**  
\* Develop a web application to streamline drop-ship order processing for an HPE server parts eCommerce business on BigCommerce.  
\* Enable processing of orders remotely, eliminating dependency on a specific office PC for key steps.

**2. Current Workflow (Summary & Pain Points):**  
\* Manual process involving multiple systems: BigCommerce, T-HUB, QuickBooks Desktop, Brokerbin, Gmail, UPS integration.  
\* Desktop dependency (T-HUB, QuickBooks Desktop).  
\* Manual data transfer, document generation (PO, Packing Slip), shipping label creation, and emailing.  
\* Time-consuming, even for simple orders.  
\* Specifically, steps 7-11 (QB PO, Packing Slip, UPS Label creation, and emailing supplier) are the primary desktop bottleneck to address first.

**3. Desired Future State (High-Level MVP):**  
\* A web-based application accessible from any device.  
\* Automate the generation and emailing of Purchase Orders, Packing Slips, and UPS Shipping Labels based on order data and user input, bypassing QuickBooks Desktop for these steps.  
\* Automate updating BigCommerce with tracking information.  
\* Focus initially on "simple" orders (single supplier).

**4. Phase 1: Initial Discovery & Scope Definition (Completed)**  
\* Business context: BigCommerce store, HPE server parts, drop-shipping.  
\* Key systems identified.  
\* Primary pain point: Desktop dependency for document/label generation and emailing.  
\* QuickBooks Strategy: Open to QBO migration eventually, but MVP will *bypass* direct QuickBooks Desktop integration for core process steps. Will provide data export for manual QB entry.  
\* Order Volume: Typically 30-40/week, peaks up to 20/day.  
\* Order Complexity: 90-95% are "simple" (single supplier). MVP focuses on this scenario. Complex orders deferred to future phases.  
\* Sourcing Process: Currently manual via Brokerbin search and email RFQ/quote replies. MVP will support *inputting* sourcing results but not automate Brokerbin interaction.  
\* Refined Goal: Build a web app to handle steps 7-11 remotely for simple orders.

**5. Phase 2: Minimum Viable Product (MVP) Scope (Agreed)**  
\* **Core Objective:** Enable remote processing of simple (single-supplier) orders by automating document generation and emailing.  
\* **Key Features Included:**  
\* BigCommerce Order Ingestion (via API): Pulling new orders, customer info, line items, shipping details.  
\* Supplier Directory: Store supplier name, email address, and Payment Terms.  
\* Order Processing Interface (UI):  
\* View BigCommerce order details (Shipping City/State, Shipping Method, SKUs, Quantities, Sale Prices).  
\* Input/Select Chosen Supplier (from directory).  
\* Input Negotiated Price and Confirmed Condition per item.  
\* Input Total Shipment Weight.  
\* Confirm Customer Shipping Method.  
\* Add specific notes for PO/Packing Slip.  
\* Action button (e.g., "Process Shipment").  
\* Purchase Order (PO) PDF Generation: Create professional PDF document based on input data, including Your Company Info, Supplier Info, internal PO Number (generated by app), Date, Ship To instructions, Item details (SKU, Description, Qty, Price, Amount), Payment Terms, Total, Notes, Customer Order Ref.  
\* Packing Slip PDF Generation: Create professional PDF document based on order data, including Your Company Info, Customer Ship To Address, BigCommerce Order ID (as Invoice #), PO Number, Date, Shipping Method, Item details (Qty, Description - *no prices*), Footer text.  
\* UPS Shipping Label Generation: Integration with UPS API to generate a shipping label PDF using customer address, chosen shipping method, and user-input weight. Obtain tracking number.  
\* Automated Email to Supplier: Generate and send email to selected supplier's email address. Subject line format (e.g., "PO [PO #]"). Attach generated PO, Packing Slip, and UPS Label PDFs.  
\* BigCommerce Tracking Update: Automatically push the UPS tracking number back to the corresponding order in BigCommerce via API and update order status (e.g., to "Shipped").  
\* PO Data Export: Feature to export key PO data (PO #, Date, Supplier, Items, Quantities, Unit Prices, Total) into an Excel file format suitable for manual import/entry into QuickBooks Desktop.  
\* Basic Error Handling & Notifications: System should detect failures (API errors, email sending failed) and notify the user.  
\* Simple Dashboard: Initial landing page with a filterable list of orders, potentially tabs for status (e.g., New, Processed - status updates based on app actions).  
\* **Features Excluded from MVP:**  
\* Direct integration with QuickBooks Desktop or Online.  
\* Automation of Brokerbin search or initial RFQ sending.  
\* Handling of complex orders (requiring multiple suppliers or split shipments).  
\* Comprehensive reporting beyond basic order status view and PO data export.  
\* Inventory tracking features.  
\* Multi-user support/permissions (initially single user).  
\* Handling returns, cancellations, etc.

**6. Phase 3: Technical Approach & Stack (Proposed)**  
\* **Platform:** Google Cloud Platform (GCP), leveraging managed services.  
\* **Proposed Core Stack:**  
\* Backend: Python + Flask (on Cloud Run).  
\* Frontend: React (served from Cloud Storage).  
\* Database: Cloud SQL for PostgreSQL.  
\* PDF Generation: Backend library (e.g., reportlab, fpdf).  
\* Email Sending: Transactional Email Service API (e.g., SendGrid, Postmark).  
\* Shipping: UPS API integration (via library).  
\* Data Export: Backend library for Excel generation (openpyxl).  
\* **Development Methodology:** Iterative / Agile development (Sprints).

**7. Phase 4: Timeline & Execution (Estimate)**  
\* Estimated MVP Development & Deployment Time: 6-10 weeks (after detailed design).  
\* Role: Collaborative Detailed Technical Design, followed by development (assistance or lead), testing, and deployment support.  
\* Next Immediate Step: **Detailed Technical Design (Phase 2 in the *project plan*).**

**8. Future Phases (Post-MVP Considerations):**  
\* Adding support for complex orders (multi-supplier/shipment).  
\* Implementing direct QuickBooks Online integration (if migration occurs).  
\* Developing more advanced reporting capabilities.  
\* Adding multi-user support.  
\* Handling edge cases (returns, cancellations).