

Project Title

AI- Powered Dynamic Pricing & Quoting Engine (CPQ)

Phase 1: Problem Understanding & Industry Analysis

Goal: Research and document problem, requirements, stakeholders, processes, use cases, AppExchange.

- **Problem Statement** : Research legacy CPQ issues (3-5 day delays, 15% margin loss, 20-30% revenue miss). Search "CPQ challenges 2025" in browser; draft 1-page summary in Google Docs highlighting AI unification needs.
 - **Requirement Gathering** : List survey questions (e.g., "What delays quoting?") in Google Forms; note Product2/Price Book audits from PDF.
 - **Stakeholder Analysis** : Map stakeholders (sales reps: UI; managers: margins) in Excel RACI matrix.
 - **Business Process Mapping** : Draw as-is (3-5 days) and to-be (<1 day with AI) in Lucidchart.
 - **Industry Use Case Analysis** : Detail SaaS (40% growth), Retail (15% margins), Healthcare/Financial (compliance) in Docs.
 - **AppExchange Exploration**: Search "dynamic pricing CPQ AI" on AppExchange; review PROS, Conga, DealHub features.
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Phase 2: Org Setup & Configuration

Goal: Set up org for CPQ. Output: Configured sandbox.

- **Org Creation** : Visit developer.salesforce.com/signup; create Developer Edition org. Install CPQ package from AppExchange.
- **Enable Features**: Setup > Quick Find > "Revenue Cloud" > Install (if not pre-installed). Enable Einstein for Revenue (Setup > Einstein > Enable). Assign "CPQ Admin" & "Einstein for Revenue" permissions to profile.
- **Product Catalog Setup** : Setup > Quick Find > "Products" > New; add 20 products (e.g., Software License) with ListPrice.
- **Pricing Rules Configuration** : Setup > CPQ > Price Rules > New; set volume discount (Qty > 100 → 15% off).
- **Users & Profiles**: Setup > Users > New; create 5 users. Setup > Profiles > Clone "Standard" to "CPQ Rep" & "CPQ Manager".
- **Roles & Permissions** : Setup > Roles > New; set Manager > Rep hierarchy. Create permission set for AI access.

- **OWD & Sharing Rules** : Setup > Security > Sharing Settings > Set Quote to Private. Add sharing rule for managers.
 - **Login Policies** : Setup > Security > Login Access Policies > Enable MFA; set IP ranges.
 - **Test** : Login as Rep; create test Quote; verify access/rules.
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Phase 3: Data Modeling & Relationships

Goal: Design data schema. Output: Schema diagram.

- **Define Objects** : Setup > Object Manager > Create custom object "Price_Rule__c". Use SBQQ__Quote__c, Product2.
 - **Add Fields** : Setup > Object Manager > Quote > Fields & Relationships > New; add Customer_Segment__c (picklist), Einstein_Score__c (number).
 - **Create Record Types** : Setup > Object Manager > Quote > Record Types > New; create "Enterprise Quote".
 - **Design Page Layouts** : Setup > Object Manager > Quote > Page Layouts > Edit; add AI fields.
 - **Establish Relationships** : Setup > Object Manager > Quote > Fields > New > Master-Detail to QuoteLine; Lookup to Opportunity.
 - **Use Schema Builder**: Setup > Schema Builder > Drag objects/fields; validate relationships.
 - **Test** : Insert test Quote/Line; check data integrity.
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Phase 4: Process Automation (Admin)

Goal: Automate processes. Output: Deployed flows.

- **Create Validation Rules** : Setup > Object Manager > Quote > Validation Rules > New; require segment for pricing.
 - **Set Up Workflows** : Setup > Quick Find > "Workflow Rules" > New; auto-update Quote status.
 - **Build Flows** : Setup > Flows > New > Record-Triggered Flow; add price calc/notification logic.
 - **Configure Approval Processes** : Setup > Approval Processes > New; set for discounts >15%.
 - **Add Email Alerts** : Setup > Workflow Actions > Email Alerts > New; notify on low AI scores.
 - **Test/Deploy** : Simulate Quote creation; deploy to sandbox.
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Phase 5: Apex Programming (Developer)

Goal: Code CPQ logic. Output: Deployed code.

- **Write Triggers** : VS Code > Open Project > New Trigger on Quote; add price adjustment logic.
 - **Implement SOQL/SOSL Queries** : VS Code > Add SOQL to fetch Quote Lines.
 - **Create Batch Apex (0.5 hr)**: VS Code > New Batch Class; archive old Quotes.
 - **Set Up Queueable/Scheduled Jobs** : VS Code > New Queueable Class; schedule market sync.
 - **Develop Test Classes** : VS Code > New Test Class; achieve 75% coverage with mocks.
 - **Test/Deploy** : Run tests in sandbox; deploy via SFDX.
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Phase 6: User Interface Development

Goal: Build UI. Output: Deployed LWCs.

- **Create Lightning App** : Setup > Apps > New Lightning App; add Quote/Dashboard tabs.
 - **Customize Record Pages** : Setup > Object Manager > Quote > Record Types > Page Layout; add AI tabs.
 - **Develop LWCs** : VS Code > New LWC; build Pricing Dashboard/Quote Builder; wire Apex.
 - **Add Navigation** : Setup > App Manager > Edit App; add quick actions.
 - **Test/Deploy** : Test UI flow (<2 mins); deploy via SFDX.
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Phase 7: Integration & External Access

Goal: Integrate services. Output: Connected APIs.

- **Configure Named Credentials** : Setup > Security > Named Credentials > New; set for Alpha Vantage/DocuSign.
 - **Set Remote Site Settings** : Setup > Security > Remote Site Settings > New; add endpoints.
 - **Implement REST/SOAP APIs** : VS Code > New Apex Class; code callouts for pricing/e-sign.
 - **Set Up OAuth Authentication** : Setup > Auth. Providers > New; configure secure access.
 - **Enable Platform Events/CDC** : Setup > Platform Events > New; sync Quote updates.
 - **Test/Deploy** : Use Postman for mock calls; deploy.
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Phase 8: Data Management & Deployment

Goal: Manage data. Output: Production-ready.

- **Use Import Wizard** : Setup > Data Import Wizard > Upload 50+ Accounts/Products.
 - **Run Data Loader** : Download Data Loader; import Quotes/Lines.
 - **Manage Duplicates** : Setup > Duplicate Rules > New; run jobs.
 - **Schedule Backups** : Setup > Data Export > Schedule weekly.
 - **Deploy with Change Sets/SFDX** : Setup > Outbound Change Sets > Upload; deploy via VS Code/SFDX.
 - **Test** : Verify data post-migration.
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Phase 9: Reporting, Dashboards & Security Review

Goal: Analytics/security. Output: Deployed reports.

- **Create Reports** : Setup > Reports > New Report Type (Quote Funnel); add Time-to-Quote, AI Effectiveness.
 - **Build Dashboards** : Setup > Dashboards > New; add charts/gauges/filters.
 - **Configure FLS/Sharing/Hierarchies** : Setup > Security > Field Accessibility > Restrict pricing; set role access.
 - **Enable Audit Trail/IP Restrictions** : Setup > Security > Audit Trails > Enable; set IP ranges/MFA.
 - **Test/Deploy** : Run reports; deploy security settings.
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Phase 10: Final Presentation & Demo Day

Goal: Showcase. Output: PDF, demo, portfolio.

- **Prepare Presentation** : PowerPoint > New; create 6 slides (challenges: 15% loss, features: CPQ/Einstein, outcomes: 50% time, 25% margins).
- **Plan Live Demo** : Script Opp > Quote > AI Calc > Approval > E-Sign workflow in sandbox.
- **Collect Feedback/Document** : Setup > Surveys > New; draft PDF/repo/video; plan LinkedIn post.
- **Test/Rehearse/Share** : Rehearse demo; upload to GitHub; post #CPQ #AI.