**COMPLETE Products & Pricing Engine - Final Implementation Steps**

**Step 1: Product Catalog Foundation**

**Tables:** product\_catalog, product\_features, plan\_types, actuarial\_tables

**ADDED:** actuarial\_tables - **Critical for insurance calculations**

**Step 2A: Reference Data & Medical Codes**

**Tables:** cpt\_codes, icd10\_codes, motor\_exclusion\_codes, motor\_exclusion\_categories

**Why Critical:**

* **CPT codes** - Medical procedure pricing and coverage
* **ICD10 codes** - Diagnosis-based coverage and exclusions
* **Motor codes** - Vehicle insurance exclusions and coverage

**Step 2B: Benefits Foundation**

**Tables:** benefit\_categories, coverage\_options, coverages

**Step 2C: Plans & Coverage Structure**

**Tables:** plans, plan\_coverage\_links, plan\_exclusions, plan\_exclusion\_links

**Step 2D: Plan Benefit Schedules**

**Tables:** plan\_benefit\_schedules, benefit\_conditions

**Step 3A: Provider Network Infrastructure**

**Tables:** provider\_types, providers, provider\_networks, provider\_network\_members, provider\_service\_prices

**Why Before Pricing:**

* **Network tiers** affect pricing (in-network vs out-network)
* **Provider costs** impact premium calculations
* **Service pricing** determines benefit limits

**Step 3B: Age & Demographic Foundations**

**Tables:** age\_brackets, premium\_age\_brackets

**Why Critical:**

* **Age-based pricing** is fundamental to insurance
* **Age brackets** determine risk categories
* **Premium multipliers** by age group

**Step 4: Basic Pricing Profiles**

**Tables:** quotation\_pricing\_profiles, quotation\_pricing\_rules (basic)

**Step 5: Advanced Pricing Components**

**Tables:**

* premium\_deductibles, premium\_copay, premium\_coinsurance, premium\_copayment
* discounts\_promotions
* premium\_industries
* agent\_commissions

**Why Critical:**

* **Cost-sharing structures** (deductibles, copays, coinsurance)
* **Industry-specific pricing** adjustments
* **Discount and promotion** calculations
* **Commission structures** for distribution

**Step 6: Advanced Pricing Rules Engine**

**Tables:** quotation\_pricing\_rules, quotation\_pricing\_rule\_age\_brackets, quotation\_pricing\_profile\_rules

**Step 7: Premium Calculation Engine**

**Tables:** premium\_calculations

**Why Separate Step:**

* **Complex calculation logic** combining all pricing factors
* **Calculation audit trail** for regulatory compliance
* **Manual override capabilities**

**Step 8: Quotation Engine**

**Tables:** quotations, quotation\_items, quotation\_factors, quotation\_coverage\_options

**Step 9: Underwriting Rules Engine**

**Tables:** underwriting\_rules, underwriting\_decision\_matrix, underwriting\_workflow\_steps

**Step 10: Quote Management & Workflow**

**Tables:** quotation\_logs, quotation\_versions, quotation\_workflow\_logs, quotation\_documents

**CRITICAL MISSING COMPONENTS WE IDENTIFIED:**

**1. Medical/Clinical Infrastructure:**

* **CPT Codes** - Medical procedure codes for coverage determination
* **ICD10 Codes** - Diagnosis codes for underwriting and exclusions
* **Essential for** medical insurance accurate pricing and coverage

**2. Actuarial Foundation:**

* **Actuarial Tables** - Statistical data for risk assessment
* **Age Brackets** - Demographic risk categorization
* **Industry Tables** - Sector-specific risk factors

**3. Provider Network Economics:**

* **Provider Networks** - In/out network pricing tiers
* **Provider Service Prices** - Negotiated rates affecting costs
* **Network Assignments** - Member access to providers

**4. Cost-Sharing Precision:**

* **Premium Deductibles** - Patient responsibility before coverage
* **Premium Copay/Coinsurance** - Shared cost structures
* **Critical for** accurate quote generation

**5. Commercial Factors:**

* **Discounts & Promotions** - Marketing-driven pricing adjustments
* **Agent Commissions** - Distribution cost calculations
* **Industry Loading** - Sector-specific risk adjustments

**6. Motor Insurance Specifics:**

* **Motor Exclusion Codes** - Vehicle-specific exclusions
* **Motor Categories** - Type-based coverage rules

**Why This Complete Approach is Critical:**

**1. Regulatory Compliance:**

* **Medical codes** ensure proper billing and coverage
* **Actuarial tables** meet regulatory pricing requirements
* **Audit trails** for rate filings and justification

**2. Accurate Pricing:**

* **All cost factors** included in premium calculations
* **Network economics** properly reflected
* **Age/demographic** risk properly assessed

**3. Competitive Positioning:**

* **Discount structures** for market competitiveness
* **Commission models** for agent incentives
* **Industry-specific** pricing for target markets

**4. Operational Efficiency:**

* **Complete quotation engine** with all factors
* **Automated underwriting** with proper rule sets
* **Provider integration** for seamless operations