

Amazon Product Competitive Analyzer

v3.0

Dual-Mode System Flow Diagram

Version: 3.0 (Dual-Mode Edition) **Last Updated:** 2026-01-29

Mode Selection Overview



```
ELSE IF product_count in range(2, 15):  
    mode = "AMBIGUOUS"  
    confidence = "LOW"  
    → Trigger clarification prompt via AskUserQuestion  
        "Would you like validation or optimization?"
```

Output: Selected mode + confidence level

MODE 1 SELECTED
(VALIDATION)
15-50 products
Comparison table

[Continue to Mode 1 Flow]

MODE 2 SELECTED
(OPTIMIZATION)
1 product
Product Brief

[Continue to Mode 2 Flow]



MODE 1: PRODUCT VALIDATION WORKFLOW

Use Case: Screen 15-50 products to determine which are viable to launch

PHASE 0: PRE-ANALYSIS SETUP
(SAME FOR BOTH MODES)

STEP 0.1: Load Knowledge Base (Auto-Education)

Input: knowledge-base/*.{md,json}

Files:

- meeting-insights.md
- historical-patterns.json
- todd-preferences.json
- market-intelligence.json
- success-factors.json

Output: Loaded learning context for analysis

Purpose: System educates itself from past analyses and meetings

STEP 0.2: Check for New Meeting Notes

Scan: 08-Meeting-Notes/ for files modified since last run
If new meetings found:

- Extract Todd's decisions and preferences
- Update meeting-insights.md
- Update todd-preferences.json

Purpose: Continuous learning from team discussions



PHASE 1: DATA INGESTION
(MODE 1: BATCH PROCESSING)

STEP 1.1: Input Validation & Format Detection

Input 1: Product Database CSV (15-50 products)
Example: Selected-15-Items.csv
Columns detected: ITEM#, DESCRIPTION, FOB, UPC, etc.

Input 2: DataDive Competitor CSV (optional but recommended)
Pattern: niche-{CODE}-competitors.csv
Columns: ASIN, Brand, Rating, Reviews, Price, Sales

Auto-Detection:

- ✓ Identify product ID column (ITEM# / SKU# / Product_ID)
- ✓ Identify cost column (FOB / Cost / Unit_Cost)
- ✓ Identify description column (DESCRIPTION / Product_Name)
- ✓ Map columns to internal schema

Output: Normalized data structure for 15-50 products



PHASES 2-8: ANALYSIS FOR EACH PRODUCT
(Repeat for all 15-50 products)

For each product in batch:

- Phase 2: Competitive Analysis (competitor landscape + keyword SEO)
- Phase 3: Financial Modeling (cost structure + pricing strategy)
- Phase 4: Pattern Matching (apply learned patterns)
- Phase 5: Scoring & Decision (8-factor score + GO/MAYBE/NO-GO)
- Phase 6: Log to Comparison Table (add row with key metrics)
- Phase 7: Log Prediction (track for future validation)
- Phase 8: Update Knowledge Base (continuous learning)

Time: ~2.5 minutes per product
Total Time: 15 products × 2.5 min = ~37 minutes



MODE 1 OUTPUT: COMPARISON TABLE

Primary Output: Product Comparison Table

Rank	ID	Product	Score	Decision	Key Metrics
1	58498	Sand	81/100	STRONG GO	55% margin, \$94K
2	62322	Pump	76/100	GO	48% margin, \$67K
3	90716	Cover	72/100	GO	42% margin, \$52K
...
15	60310	Light	52/100	NO-GO	8% margin, issues

Secondary Output: Individual Product Reports (optional)

- EXECUTIVE-SUMMARY-{PRODUCT_ID}.md (for each GO product)
- COMPETITIVE-LANDSCAPE-{PRODUCT_ID}.md
- FINANCIAL-MODEL-{PRODUCT_ID}.md

Learning Output: Analysis Summary

- Patterns identified across batch
- Portfolio-level insights
- Recommended products for Mode 2 optimization

⚠ MODE 1 DOES NOT INCLUDE:

- ✗ Optimized listing copy (title, bullets, description)
 - ✗ PPC campaign structure
 - ✗ 90-day implementation roadmap
 - ✗ A+ Content recommendations
- Use Mode 2 for complete listing optimization



[MODE 1 COMPLETE]

User reviews comparison table
Selects winners for potential Mode 2 run



MODE 2: LISTING OPTIMIZATION WORKFLOW

Use Case: Deep analysis + complete Product Brief for ONE product (new or existing)

PHASE 0: PRE-ANALYSIS SETUP
(SAME AS MODE 1)

Load knowledge base, check meeting notes, educate system



PHASE 1: DATA INGESTION
(MODE 2: SINGLE PRODUCT DEEP DIVE)

STEP 1.1: Input Validation & Format Detection

Input 1: Single Product Data

- ASIN (if existing product)
- Product details (name, cost, specs)
- Current listing data (if optimizing existing)

Input 2: Competitor Keyword Research (REQUIRED for Mode 2)

- niche-{PRODUCT_ID}-keywords.csv (DataDive export)
- niche-{PRODUCT_ID}-competitors.csv
- 44+ keywords with search volumes and rankings
- 10+ competitor ASINs with performance data

Input 3: Current Listing Data (if existing product)

- Current title, bullets, description
- Current rankings and performance
- Reviews, ratings, sales velocity

Output: Comprehensive product context for deep analysis



PHASES 2-8: DEEP COMPETITIVE ANALYSIS
(Same phases as Mode 1, but more detailed)

- Phase 2: COMPETITIVE ANALYSIS
 - Detailed competitor landscape (10-20 ASINs)
 - Per-unit pricing analysis (critical for multi-packs)
 - Why competitors are winning (specific keyword rankings)
 - Keyword gap analysis (your rankings vs. top 3 performers)
- Phase 3: FINANCIAL MODELING
 - Cost structure breakdown
 - Multi-pack pricing opportunities (if applicable)

- FBA fee leverage analysis
- 3 pricing scenarios (conservative, base, optimistic)
- Phase 4: PATTERN MATCHING
 - Apply all learned patterns
 - Identify specific opportunities for this product
- Phase 5: SCORING & DECISION
 - 8-factor score + GO/MAYBE/NO-GO decision
 - Detailed rationale for each factor

Time: ~30-45 minutes for Phases 2-8



★ PHASE 9: LISTING OPTIMIZATION (MODE 2 ONLY) ★

STEP 9.1: DataDive MKL Analysis

Input: niche-{PRODUCT_ID}-keywords.csv (44+ keywords)

Analyze Master Keyword List (MKL):

- High-volume keywords (2,000+ monthly searches)
- Medium-volume keywords (450-1,999 searches)
- Long-tail keywords (<450 searches)
- Current rankings vs. competitors
- Search volume opportunities

Output: Prioritized keyword list for optimization



STEP 9.2: Keyword Bucketing & Strategy

Categorize keywords into buckets:

TRASH (ignore):

- Irrelevant keywords, wrong product category
- Low search volume (<100) + low relevance

MKL (Master Keyword List - use in listing):

- High relevance + high search volume
- Primary keywords for title and bullets
- Example: "hot tub filter" (2,972 SV)

OUTLIERS (backend keywords):

- Relevant but don't fit naturally in listing

- Good search volume but awkward phrasing
- Perfect for backend search terms

RESIDUE (consider for A+ Content):

- Relevant but lower priority
- Use in A+ Content or image text

Output: Strategic keyword allocation across listing elements



STEP 9.3: Optimize Title (250 characters max)

SEO Ranking Juice Formula:

Title Position 1-3:	100% ranking juice
Title Position 4-10:	80% ranking juice
Title Position 11+:	50% ranking juice
Bullets:	30% ranking juice
Backend:	20% ranking juice

Strategy:

1. Lead with highest-volume keyword (Position 1)
2. Include brand name (Saluspa, Bestway, Coleman)
3. Add pack size options (2, 4, 8, 12-pack)
4. Include Type VI + exact dimensions
5. List compatible models (Miami, Palm Springs, etc.)

Example Optimized Title:

"Hot Tub Filter Replacement for Saluspa, Bestway, Coleman
(2, 4, 8, 12 Pack) | Type VI Spa Filter Cartridge 4.25\"x3\" |
Compatible Saluspa Coronado Miami Palm Springs Vancouver"

Output: Optimized 250-character title with keyword coverage



STEP 9.4: Optimize Bullets (5 bullets, benefit-driven)

Bullet Structure:

- BENEFIT HEADER: Feature explanation with keywords
- Each bullet covers 8-12 MKL keywords naturally
- Focus on benefits, not just features

Bullet 1: COMPATIBILITY (covers "compatible", "fits", models)

Bullet 2: PERFORMANCE (covers "clean", "filtration", "quality")

Bullet 3: VALUE (covers "pack", "replacement", "save money")

Bullet 4: INSTALLATION (covers "easy", "install", "replace")

Bullet 5: SPECIFICATIONS (covers "Type VI", dimensions, materials)

Example Bullet #1:

"✓ PERFECT FIT FOR YOUR HOT TUB: Universal Type VI replacement filter cartridge compatible with Saluspa hot tubs (Miami, Palm Springs, Coronado, Vancouver, Cancun, Hawaii, Hollywood, Budapest), Bestway pool filter pump, Coleman hot tub, and Avenli spa filters; exact 4.25\" height x 3\" diameter fits like original equipment - simply remove old filter and replace with ours"

Output: 5 optimized bullets with keyword coverage + benefits



STEP 9.5: Backend Keywords (250 bytes max)

Strategy:

- Include OUTLIER keywords not in title/bullets
- No commas (Amazon auto-parses)
- No repetition (already indexed in title/bullets)
- Misspellings and alternate phrasings
- French Canadian keywords (if applicable)

Example:

"filtre spa cartouche remplacement inflatable jacuzzi above ground pump accessory maintenance clean water quality 2pk 4pk 8pk 12pk bulk multi pack family size annual supply wholesale"

Output: 250-byte backend keyword string



STEP 9.6: Variation Architecture (if applicable)

Analyze if multi-pack strategy makes sense:

Criteria:

- Competitors sell multi-packs (6-16 pack common)
- Per-unit pricing gap exists
- FBA fees create margin opportunity at scale
- Product has repeat-purchase pattern

If YES, design variation ladder:

Parent ASIN: Hot Tub Filter (all variations)

Child 1: 2-pack (entry tier, existing)

Child 2: 4-pack (MOST POPULAR tier)

Child 3: 8-pack (BEST VALUE tier)

Child 4: 12-pack (ANNUAL SUPPLY tier)

Pricing strategy per variation:

- 2-pack: \$17.98 (\$8.99/filter) - keep current
- 4-pack: \$29.99 (\$7.50/filter) - 50% of sales
- 8-pack: \$49.99 (\$6.25/filter) - 30% of sales
- 12-pack: \$67.99 (\$5.67/filter) - 15% of sales

Output: Complete variation architecture with pricing rationale



STEP 9.7: A+ Content Strategy (5 modules)

Module 1: Value Comparison Chart

- 2-pack vs 4-pack vs 8-pack vs 12-pack pricing
- Per-filter cost savings visualization
- "Annual supply = 12-pack" messaging

Module 2: Compatibility Guide

- Visual compatibility chart with all spa models
- Type VI specification details
- "Fits these models" with images

Module 3: Installation Guide

- Step-by-step replacement process
- "Remove old filter, insert new one" simplicity
- Maintenance tips

Module 4: Why Choose Us (Benefits Grid)

- Premium filtration quality
- Multi-pack convenience
- Money-saving value proposition

Module 5: FAQ + Savings Calculator

- "How often should I replace?" → Every 2 weeks
- "Which pack size?" → Calculator shows savings
- "Will it fit my spa?" → Yes (Type VI)

Output: 5 A+ Content module layouts with copy



STEP 9.8: PPC Campaign Structure

Campaign 1: BRANDED DEFENSE

- Budget: \$10/day (20% of total)
- Keywords: "saluspa filter", "bestway filter VI"
- Target ACOS: 15% (low competition)

Campaign 2: GENERIC HIGH-VOLUME

Budget: \$25/day (50% of total)

Keywords: "hot tub filter", "spa filter replacement"

Target ACOS: 25% (medium competition)

Campaign 3: PRODUCT TARGETING

Budget: \$15/day (30% of total)

Targets: Competitor ASINs (B09Q68WP61, B0B6ZVMD7P, etc.)

Target ACOS: 30% (steal competitor traffic)

Total Daily Budget: \$50/day

Monthly Investment: \$1,500/month

Expected Sales: \$9,600/month (6.4x ROAS)

Output: Complete PPC campaign structure with keywords and bids



STEP 9.9: 90-Day Implementation Roadmap

WEEK 1-2: Listing Optimization

- Update title, bullets, backend keywords
- Create 4-pack, 8-pack, 12-pack variations
- Design variation images with badges
- Order initial inventory (50×4pk, 30×8pk, 20×12pk)

WEEK 3-4: Soft Launch + PPC Testing

- Launch PPC at \$50/day
- Monitor ACOS and adjust bids
- Generate first 10-15 reviews (Vine if available)
- Track conversion rates by variation

WEEK 5-8: A+ Content + Scale

- Design and upload A+ Content (5 modules)
- Scale PPC to \$75/day based on performance
- Optimize underperforming keywords
- Reorder inventory based on sales mix

WEEK 9-12: Full Scale + Optimization

- Scale PPC to \$100/day
- Target 4.65+ star rating
- Expected: 200 units/month, \$9,600 revenue, \$2,332 profit
- Monitor and iterate

Output: Week-by-week action plan with metrics and milestones



MODE 2 OUTPUT: COMPLETE PRODUCT BRIEF

Primary Output: {product}-competitive-analysis-final.md

Size: 50-100 KB comprehensive analysis document

Contains 14 Sections:

1. Executive Summary
2. Product Economics & Validation
3. Competitive Landscape Analysis
4. Keyword Performance Analysis
5. Multi-Pack Pricing Strategy (if applicable)
6. Optimized Listing Copy (title + bullets + backend)
7. Variation Architecture (2, 4, 8, 12-pack recommendations)
8. Profitability Projections (3 scenarios)
9. A+ Content Strategy (5 module layouts)
10. PPC Campaign Structure (keywords, bids, budgets)
11. 90-Day Implementation Roadmap (week-by-week plan)
12. Risk Analysis & Mitigation
13. Success Metrics & KPIs
14. Implementation Checklist

Secondary Outputs:

- README.md (project overview)
- DATA-SOURCES.md (research provenance)
- (Future) image-specs/, ppc-campaigns/, etc.

✅ MODE 2 INCLUDES EVERYTHING FROM MODE 1 PLUS:

- ✓ Optimized listing copy (production-ready)
- ✓ PPC campaign structure (ready to launch)
- ✓ 90-day implementation roadmap
- ✓ A+ Content recommendations
- ✓ Multi-pack strategy (if applicable)
- ✓ Complete competitive positioning

Time Investment: ~1-2 hours for complete Product Brief

Example: Saluspa Hot Tub Filter analysis

Reference: /09-Listing-Optimization/Saluspa-Hot-Tub-Filter/



[MODE 2 COMPLETE]

User reviews Product Brief

Implements optimization strategy

Launches with PPC campaigns

Mode Comparison Matrix

Aspect	Mode 1 (Validation)	Mode 2 (Optimization)
Product Count	15-50 products	1 product (deep dive)
Time Required	~2.5 min per product	~1-2 hours total
Primary Use Case	Screen products to pick winners	Optimize listing for launch
Input Required	Product spreadsheet + DataDive (optional)	Product + competitor keywords (required)
Output Size	Comparison table + summary reports	50-100 KB Product Brief
Listing Copy	✗ NO	✓ YES (title, bullets, backend)
Competitive Analysis	✓ High-level (GO/NO-GO)	✓ Deep (keyword strategy, pricing)
Multi-Pack Strategy	✗ NO	✓ YES (if applicable)
PPC Campaigns	✗ NO	✓ YES (complete structure)
Implementation Roadmap	✗ NO	✓ YES (90-day plan)
A+ Content	✗ NO	✓ YES (5 module layouts)
Best For	Supplier evaluation, product screening	Launch prep, listing refresh



Combined Workflow: Mode 1 → Mode 2

STEP 1: Run Mode 1 (Validation)
Input: 18 products from supplier
Output: Comparison table
Result: 6 GO, 7 MAYBE, 5 NO-GO



STEP 2: User Reviews Table
User selects: Top 3 GO products
Products: 58498, 62322, 90716



STEP 3: Run Mode 2 on Winners (Sequential)
"Create Product Brief for Product 58498"
→ Complete Product Brief generated
"Create Product Brief for Product 62322"
→ Complete Product Brief generated
"Create Product Brief for Product 90716"
→ Complete Product Brief generated



RESULT: 3 Production-Ready Product Briefs
Time: 37 min (Mode 1) + 4-6 hours (Mode 2×3)
Total: ~5 hours for complete analysis



When to Use Each Mode

Use Mode 1 When:

✅ Evaluating new supplier with 15-50 products ✅ Quarterly product catalog review ✅ Need to prioritize which products to launch ✅ Want high-level GO/NO-GO decisions ✅ Limited time, need quick screening

Use Mode 2 When:

- ✅ Preparing to launch a specific product
- ✅ Optimizing existing underperforming listing
- ✅ Need complete listing copy for implementation
- ✅ Developing competitive positioning strategy
- ✅ Creating multi-pack variations
- ✅ Building PPC campaign from scratch

Use Both (Sequential) When:

- ✅ New supplier with many products (Mode 1 first)
 - ✅ Pick winners from Mode 1 results
 - ✅ Run Mode 2 on selected GO products
 - ✅ Maximum strategic value with minimal waste
-

Key System Components (Both Modes)

1. Flexible Input Handler

- Accepts any CSV format from any supplier
- Auto-detects columns (ITEM# vs SKU# vs Product_ID)
- Cross-references product database with DataDive data
- Normalizes data into internal schema

2. Self-Learning Knowledge Base

- 5 JSON/MD files storing institutional knowledge
- Auto-loads before each analysis
- Updates after each analysis
- Extracts from meeting notes automatically

3. Pattern Recognition Engine

- 6+ success patterns identified
- 2+ rejection patterns for auto-filtering
- Pattern matching during analysis
- New pattern discovery over time

4. Multi-Factor Scoring Model

- 8 weighted factors (Margin 25%, Competition 20%, etc.)

- 0-100 score calculation with confidence level
- Decision thresholds (85+ = STRONG GO, 70-84 = GO, etc.)
- Self-calibrating weights based on accuracy

5. Mode Auto-Detection

- Detects based on product count (1 vs 15+)
- Keywords trigger Mode 2 ("optimize listing", "Product Brief")
- Asks for clarification when ambiguous (2-14 products)
- High confidence detection prevents wrong workflow

6. Feedback Loop System

- Logs predictions for future validation
- Tracks actual decisions from user
- Compares predicted vs actual outcomes
- Adjusts weights automatically after 3-5 validations



Performance Metrics

Mode 1 Performance

Products Analyzed:	15-50 per run
Time per Product:	~2.5 minutes
Total Time:	15 products = ~37 minutes
Output:	Comparison table + summary reports
Confidence:	85%+ (after learning phase)

Mode 2 Performance

Products Analyzed:	1 per run (deep dive)
Time per Product:	~1-2 hours
Output:	50-100 KB Product Brief
Detail Level:	Production-ready listing copy
Competitive Analysis:	Deep keyword strategy + pricing

Example Workflows

Example 1: New Supplier Evaluation

Day 1: Run Mode 1 on 30 products → 8 GO, 12 MAYBE, 10 NO-GO
Day 2: Review results, select top 3 GO products
Day 3-5: Run Mode 2 on each of the 3 winners
Result: 3 production-ready Product Briefs for launch

Example 2: Existing Product Optimization

Day 1: Run Mode 2 on underperforming ASIN B08R11D8NJ
Result: Complete competitive analysis reveals per-filter pricing problem
Solution: Multi-pack strategy (2, 4, 8, 12-pack) to fix perception
Projected: +128% revenue, +211% profit with same traffic
Example: Saluspa Hot Tub Filter analysis

Example 3: Personal Product Research

Scenario: You have 5 product ideas for your own Amazon business
Step 1: Run Mode 1 to screen all 5 → identify top 2 winners
Step 2: Run Mode 2 on each winner → get complete launch strategy
Result: Data-driven product selection + implementation plans

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Operational - Both modes fully documented

Official Mode 2 Example: [Saluspa Hot Tub Filter](#)

This flow diagram reflects the complete dual-mode architecture of the Amazon Product Competitive Analyzer skill.