

Agentic AI Marketing Platform

Core Challenge: D2C brands drowning in fragmented marketing operations across 10+ platforms without intelligent automation or autonomous decision-making.

Key Problems:

- **Platform Fragmentation Chaos:** Marketing teams manually juggling Shopify, Instagram, Meta Ads, Google Ads, Amazon, Flipkart, email tools, analytics—no unified orchestration
- **Zero Autonomous Optimization:** No AI agents to independently execute A/B tests, optimize creative variations, or reallocate budgets based on real-time performance
- **Context Switching Fatigue:** Marketers spending 3-4 hours daily switching between tools, losing strategic focus to operational firefighting
- **Inconsistent Brand Voice:** Manual content creation across channels leads to messaging inconsistency and brand dilution
- **Delayed Market Response:** 24-48 hour lag to respond to competitor moves, trend shifts, or viral opportunities due to manual workflows
- **Business Impact:** Marketing teams operating at 30% strategic capacity, losing market share to competitors with autonomous marketing systems, unable to capitalize on real-time opportunities

Client Industry: B2B SaaS

Technology Stack

Core Technologies

- **Backend:** Python 3.11 with Django
- **API Layer:** Django REST Framework
- **Frontend:** React 18 with Next.js
- **Database:** PostgreSQL for structured data, MongoDB for content
- **Cache:** Redis for sessions and rate limiting

Infrastructure

- **Cloud:** AWS (ECS, RDS, S3, Lambda, SQS)
- **CDN:** AWS CloudFront
- **Monitoring:** New Relic and Sentry
- **CI/CD:** GitHub Actions
- **Container:** Docker with ECS

AI/ML Components

Language Models

- OpenAI GPT-4 for generating content
- Claude 3 for longer pieces

Image Generation

- DALL-E 3 for product images
- Midjourney API for creative stuff

NLP Processing

- spaCy for analyzing text
- Hugging Face Transformers for sentiment

Recommendation Engine

- TensorFlow for collaborative filtering
- Custom algos for matching personas

Marketing Technology Integrations

E-commerce Platforms

- Shopify API
- WooCommerce REST API

Marketplace APIs

- Amazon Advertising API
- Flipkart Ads API
- Nykaa Seller API

Analytics

- Google Analytics 4
- Meta Pixel
- Custom tracking for attribution

A/B Testing

- Google Optimize
- Our own experimentation setup

Development Process

Phase 1: Market Research & Strategy (Weeks 1-2)

Activities:

- Analyzing competitors in beauty and wellness
- Researching and validating customer personas
- Auditing channel performance (Amazon, Flipkart, Nykaa, social)
- Spotting content gaps
- Mapping the marketing funnel
- Defining success metrics

Deliverables:

- Research report
- Persona docs (4 main ones)
- Channel strategy doc
- Content framework

Phase 2: Platform Architecture & Design (Weeks 3-4)

Activities:

- Designing multi-tenant setup
- Planning AI content workflows
- Building attribution models
- Setting up A/B testing
- Handling security and privacy
- Planning for scale

Deliverables:

- Architecture doc
- Database schemas
- API designs
- Security plan
- UI/UX mockups

Phase 3: Core Platform Development (Weeks 5-14)

01

Sprint 1 (Weeks 5-6): Persona Engine

- Pulling customer data from e-commerce
- Analyzing behaviors
- Clustering personas with K-means
- Generating profiles
- Identifying purchase patterns
- Defining segment traits

02

Sprint 2 (Weeks 7-9): AI Content Generation Module

- Integrating OpenAI GPT-4
- Building content templates for:
 - Product descriptions
 - Social posts
 - Emails
 - Blogs
- Customizing brand voice
- Adding multi-language
- Generating variations
- Scoring quality

03

Sprint 3 (Weeks 10-11): Multi-Channel Campaign Manager

- Hooking up Amazon Advertising API
- Integrating Flipkart Ads
- Managing Nykaa campaigns
- Allocating budgets
- Optimizing bids
- Scheduling campaigns
- Coordinating across channels

04

Sprint 4 (Weeks 12-14): Performance Optimization & Attribution

- Creating multi-touch attribution
- Tracking performance in real-time
- Managing A/B tests
- Analyzing conversion funnels
- Recommending budget tweaks
- Calculating ROI
- Gathering competitive pricing intel

Deliverables:

- Working platform
- AI content system
- Campaign manager
- Attribution and analytics tools

Phase 4: Intelligence & Automation (Weeks 15-17)

Activities:

- Building a competitor scraper for:
 - Monitoring products
 - Analyzing prices
 - Tracking promotions
 - Sentiment on reviews
- Adding predictive analytics for:
 - Forecasting demand
 - Predicting seasonal trends
 - Estimating campaign results
- Setting up automations like:
 - Reallocating budgets dynamically
 - Adjusting bids
 - Rotating creatives
 - Expanding audiences

Deliverables:

- Intelligence dashboard
- Predictive models
- Automation engine
- ML recommendations

Phase 5: Dashboard & Reporting (Weeks 18-19)

Activities:

- Developing exec dashboards
- Building ops dashboards
- Showing real-time metrics
- Creating custom reports
- Automating weekly/monthly reports
- Setting up anomaly alerts
- Making it mobile-friendly

Deliverables:

- Various dashboards
- Reporting system
- Alert notifications
- Mobile app (if needed)

Phase 6: Testing & Optimization (Weeks 20-21)

Activities:

- Running end-to-end tests with pilot campaigns
- Load testing for 10K users
- Validating AI content quality
- Checking attribution accuracy
- Doing security pen tests
- Optimizing performance
- Fixing bugs

Deliverables:

- Test reports
- Benchmarks
- Security audit
- Optimized system

Phase 7: Launch & Onboarding (Weeks 22-24)

Activities:

- Rolling out in phases (starting with 2 brands)
- Customizing per brand
- Training marketing teams
- Migrating content libraries
- Importing historical data
- Setting up monitoring and support

Deliverables:

- Live system
- Brand configs
- Training materials
- Launch report

Development Timeline

Total Duration: 24 weeks (6 months)



Success Metrics

Campaign Performance

52%

Conversion Rate Improvement

Conversion Rate increase from 3.2% to 5.1%

Thanks to better targeting and messaging

3.5x

Click-Through Rate (CTR)

Optimized ad copy and creatives
Sharper audience focus

28%

Cost Per Click (CPC) Reduction

Auto bid tweaks
Higher quality scores

Customer Acquisition

Customer Acquisition Cost (CAC): Cut by 40%

- From \$45 to \$27
- Savings of \$18 each

Lead Quality Score: Up 35%

- Smarter targeting
- Persona-driven campaigns

Customer Lifetime Value (CLV): Up 22%

- Better matching
- Stronger retention

Content Generation

Production Volume: 10x more

From 20 to 200 pieces/month

Creation Time: Down 85%

From 4 hours to 35 minutes per piece

Performance: 2.8x more engagement

Optimized headlines
Tailored messaging

Variant Testing: 15 options per campaign

Quick A/B
Data-based tweaks

Multi-Channel Performance

Amazon Sales: Up 65%

- Better listings
- Enhanced content
- Efficient ads

Flipkart Conversion: Up 48%

- Improved descriptions
- Competitive pricing

Nykaa Visibility: 3x better rankings

- SEO content
- Stronger presence

Attribution & Analytics

88%

Accuracy for multi-touch

Full journey view
Channel insights

82%

Predictive Accuracy for campaigns

Pre-launch estimates
Budget tweaks

Reporting: Under 1 minute fresh

- Instant insights
- Quicker decisions

Operational Efficiency

1

Team Productivity: 3.5x higher

Automating routine work
More strategy time

2

Setup Time: From 2 days to 2 hours

Templates
Auto deployment

3

Budget Efficiency: Up 25%

Data-driven
Real-time optimization

Business Impact

89%

Revenue Growth

in 6 months

3.2

Market Share

Gained 3.2 points

156%

Brand Awareness

more branded searches

18.2K

Customer Base

From 8.5K to 18.2K

4.2x

Return on Ad Spend (ROAS)

from 2.1x