

# BRICK 2: Fast Funnel Marketing Engine - Development Specification

## Project Overview

Build BRICK 2 as a standalone marketing automation system that delivers immediate ROI through human-controlled interfaces while providing integration endpoints for future AI orchestration (BRICK 1).

**Architecture Strategy:** Leverage AI coding assistants and proven marketing platforms to maximize development efficiency and system reliability.

**Compensation Structure:** Milestone-based bidding with validation requirements

## Compensation Structure

### Milestone-Based Bidding Schedule

**Instructions for Bidders:** Please provide your bid amount for each milestone separately. Your total project bid should reflect the complexity and hours indicated for each milestone.

Milestone	Hours	Complexity Weight	Your Bid	Payment Trigger
Milestone 1	5 hours	25% (Foundation - Most Critical)	\$____	All success criteria validated + automated testing passed
Milestone 2	4 hours	20% (User Interface Validation)	\$____	Non-technical user demonstration completed successfully
Milestone 3	3 hours	15% (Outreach Automation)	\$____	Multi-channel outreach operational with engagement metrics
Milestone 4	2 hours	10% (Business Integration)	\$____	Lead-to-revenue tracking demonstrated with test data
Milestone 5	3 hours	15% (AI Conversation System)	\$____	AI chat system achieves >80% qualification accuracy
Milestone 6	4 hours	15% (BRICK 1 Integration - Most Complex)	\$____	Complete BRICK 1 integration tested with Fletcher's system
Total	21 hours	100%	\$____	All milestones validated + final system operational

## Bidding Requirements

**Individual Milestone Bids:** Provide separate pricing for each milestone to allow for flexible project management **Total Project Value:** Sum of all milestone bids represents your complete project price **Justification:** Brief explanation of your pricing structure and approach for each milestone **Timeline Commitment:** Specify your estimated completion time for each milestone

## Payment Terms and Conditions

**Payment Method:** Electronic transfer within 48 hours of milestone validation **Validation Process:** Each milestone must pass all listed success criteria before payment release **Documentation Required:** Code delivery, testing results, and demonstration video for each milestone **Project Continuity:** If project terminates early, developer provides complete code handoff and documentation

## Milestone Validation Requirements

**Technical Validation:** All automated tests pass, code meets quality standards, functionality operates as specified **Business Validation:** Success criteria demonstrated through actual usage scenarios, not just technical functionality **Integration Validation:** Each component integrates properly with existing systems and future BRICK 1 requirements **Documentation Validation:** Complete technical documentation and user guides provided for each milestone

## Quality Assurance Standards

**Code Quality:** Clean, commented code with consistent styling and proper error handling **Testing Coverage:** Automated test suite with >80% coverage for each milestone **Performance Standards:** All response time and reliability requirements met **Security Compliance:** Proper authentication, data protection, and API security implemented

## Project Termination Provisions

**Early Termination Rights:** Project may be terminated after any milestone if quality standards not met **Code Ownership:** All completed and validated milestone code transfers to client upon payment **Transition Support:** Developer provides 2-hour handoff session and complete documentation if project transitions **No Penalty Termination:** Either party may terminate with 24-hour notice after milestone completion

## Performance Incentive Opportunities

**Performance Bonus:** Additional bonus if all milestones completed ahead of schedule with exceptional quality **Integration Success Bonus:** Additional bonus if BRICK 1 integration works flawlessly on first attempt with Fletcher's system **Business Impact Bonus:** Additional bonus if system generates measurable business results within first week of operation

*Note: Bonus amounts to be negotiated based on final project value and performance expectations*

## Development Milestones

### Milestone 1 — Marketing Foundation (5 hours)

Task	Implementation Method	Deliverable
FastAPI backend architecture	Cursor Composer generation	Complete REST API structure
Database schema + migrations	Claude Projects assistance	Campaign, lead, performance tables
Docker + CI/CD pipeline	GitHub Copilot Workspace	Containerized deployment ready
Google Ads API integration	Cursor + Claude	Campaign CRUD operations
Facebook Ads API integration	Cursor Autocomplete	Ad management endpoints
LinkedIn Ads API integration	Claude API assistance	Business campaign functionality
Multi-platform campaign orchestrator	Claude + Cursor	Unified campaign management

### Milestone 1 Success Criteria:

- All API integrations successfully authenticate and retrieve data
- Can create campaigns across all three platforms via unified endpoints
- Database schema supports full marketing automation workflow
- Docker container deploys without errors in staging environment
- Campaign performance data flows correctly from all platforms
- Response time <500ms for all campaign management operations

**Payment Trigger:** All success criteria validated through automated testing

### Milestone 2 — Human Control Dashboard (4 hours)

Task	Implementation Method	Deliverable
React dashboard foundation	v0.dev component generation	Responsive web interface
Campaign management interface	v0.dev + Claude integration	Visual campaign builder
Real-time analytics dashboard	Retool + API integration	Performance monitoring
One-click campaign launcher	Custom React + API	Simplified campaign deployment
Alert system integration	Claude-generated logic	Budget and performance notifications

### Milestone 2 Success Criteria:

- Non-technical users can create campaigns through UI in <5 minutes
- Real-time performance data updates every 30 seconds
- Alert system triggers correctly for budget thresholds (test with \$1 limits)
- Dashboard displays correctly on desktop and mobile devices
- All campaign management operations accessible through single interface
- User can pause/resume campaigns with immediate effect

**Payment Trigger:** Demonstration of complete campaign creation and management by non-technical user

## Milestone 3 — Multi-Channel Outreach System (3 hours)

Task	Implementation Method	Deliverable
Email automation sequences	Clay.com + API wrapper	Automated email campaigns
LinkedIn outreach automation	PhantomBuster + safety limits	Social media automation
Lead scoring algorithms	Claude + mathematical logic	Intelligent lead prioritization
Response tracking system	Zapier + custom webhooks	Automated follow-up triggers

### Milestone 3 Success Criteria:

- Email sequences deploy and execute on schedule
- LinkedIn automation respects rate limits (max 20 connections/day)
- Lead scoring algorithm assigns scores 0-100 with clear criteria
- Response detection triggers appropriate follow-up actions
- All outreach channels integrate with lead database
- Sequence performance tracking shows open rates, response rates

**Payment Trigger:** Complete outreach sequence operational across email and LinkedIn with measurable engagement metrics

## Milestone 4 — Business Integration (2 hours)

Task	Implementation Method	Deliverable
HubSpot CRM integration	Make.com workflow automation	Automated lead handoff
Revenue attribution pipeline	Zapier + custom logic	End-to-end tracking
Automated reporting system	Retool dashboard + APIs	Scheduled business reports

### Milestone 4 Success Criteria:

- Leads automatically sync to HubSpot within 5 minutes of qualification
- Revenue attribution tracks complete customer journey from ad to sale
- Automated reports generate and deliver on schedule
- Data integrity maintained across all system integrations
- ROI calculations accurate and verifiable

**Payment Trigger:** Complete lead-to-revenue tracking demonstrated with test data showing accurate attribution

## Milestone 5 — Conversational AI Integration (3 hours)

Task	Implementation Method	Deliverable
ChatGPT lead qualification	Claude + Voiceflow integration	AI-powered chat system
Human handoff protocols	Intercom + trigger system	Escalation management
Conversation analytics	Claude-generated metrics	Quality scoring system

### Milestone 5 Success Criteria:

- ChatGPT correctly qualifies leads based on defined criteria
- Human handoff triggers within 30 seconds when needed
- Conversation quality scores correlate with actual conversion rates
- System handles concurrent conversations without performance degradation
- Chat interface integrates seamlessly with existing dashboard

**Payment Trigger:** AI chat system demonstrates >80% accuracy in lead qualification compared to human baseline

## Milestone 6 — BRICK 1 Integration Layer (4 hours)

Task	Implementation Method	Deliverable
UBIC v1.5 compliance endpoints	Claude Projects implementation	All required UBIC endpoints
Message type handlers	Claude + Cursor integration	Incoming/outgoing message processors
Feature flag implementation	Claude Projects	Required capability flags and negotiation
Strategic guidance receiver	Cursor + Claude integration	BRICK 1 communication interface
Performance reporting API	Automated data formatting	AI-readable performance data
Human/AI mode toggle	React + backend integration	Seamless mode switching
Integration test suite	Automated testing framework	Complete BRICK 1/BRICK 2 validation

### BRICK 1 Integration Specifications:

#### System Identity:

- **Brick Name:** `brick2-marketing-engine`
- **UBIC Version:** v1.5 compliance required
- **JWT Claims:** `brick_capabilities` with marketing automation scope

#### Required UBIC Endpoints:

- `GET /health` - System health with marketing platform dependency status
- `GET /capabilities` - Available marketing features and feature flags
- `GET /state` - Current campaign performance and operational metrics
- `GET /dependencies` - Marketing platform API status (Google, Facebook, LinkedIn, HubSpot)
- `POST /message` - Receives strategic guidance and optimization directives from BRICK 1
- `POST /send` - Sends performance reports and recommendations to BRICK 1
- `POST /reload-config` - Updates campaign settings and platform credentials
- `POST /shutdown` - Graceful campaign pause and system shutdown
- `POST /emergency-stop` - Immediate campaign halt for security/budget breaches

## Message Types - Incoming (BRICK 1 → BRICK 2):

- `strategic_guidance` - Campaign priorities, target audience, budget allocation
- `optimization_directive` - Performance optimization instructions based on AI analysis
- `resource_allocation` - Budget distribution changes across marketing channels
- `emergency_pause` - Immediate campaign halt instruction

## Message Types - Outgoing (BRICK 2 → BRICK 1):

- `performance_report` - Comprehensive campaign metrics and ROI data
- `lead_intelligence` - Qualified lead data and conversion insights
- `optimization_recommendation` - Suggested strategy improvements based on performance
- `resource_utilization` - Current spend and efficiency metrics across channels
- `anomaly_alert` - Unusual performance patterns requiring strategic attention

## Required Feature Flags:

- `multi_platform_campaigns` - Google Ads, Facebook, LinkedIn integration capability
- `automated_lead_qualification` - ChatGPT-powered lead scoring and routing
- `crm_integration` - HubSpot/Salesforce automated handoff capability
- `real_time_optimization` - Dynamic budget and bid adjustment capability
- `human_override_mode` - Manual control toggle for campaign management
- `revenue_attribution` - End-to-end tracking from ad to sale capability
- `email_automation` - Sequence-based nurturing campaigns
- `social_outreach` - LinkedIn and social media automation
- `conversation_ai` - Automated chat qualification system
- `performance_analytics` - Real-time dashboard and reporting

## Priority Message Handling:

- `emergency` - Immediate campaign pause/safety instructions (<1 second response)
- `high` - Budget reallocation and optimization directives (<30 seconds)
- `normal` - Regular performance reporting and strategic guidance (<5 minutes)
- `low` - Routine analytics and system health updates (<15 minutes)

## Message Format Example (Strategic Guidance):

json

```
{  
  "idempotency_key": "uuid4",  
  "priority": "high",  
  "source": "brick1-strategic-core",  
  "target": "brick2-marketing-engine",  
  "message_type": "strategic_guidance",  
  "payload": {  
    "campaign_priorities": {  
      "target_audience": "AI developers, conscious entrepreneurs",  
      "budget_allocation": {"google_ads": 60, "linkedin": 30, "email": 10},  
      "optimization_focus": "lead_quality_over_volume",  
      "geographic_targeting": ["US", "UK", "Canada"]  
    }  
  },  
  "trace_id": "uuid4",  
  "emergence": {  
    "signal": true,  
    "type": "marketing_optimization",  
    "confidence": 0.85,  
    "threshold_metrics": {}  
  }  
}
```

### Message Format Example (Performance Report):

json

```
{  
  "idempotency_key": "uuid4",  
  "priority": "normal",  
  "source": "brick2-marketing-engine",  
  "target": "brick1-strategic-core",  
  "message_type": "performance_report",  
  "payload": {  
    "campaign_performance": {  
      "leads_generated": 47,  
      "cost_per_lead": 23.50,  
      "conversion_rate": 0.12,  
      "roi": 4.2,  
      "period": "last_24_hours"  
    },  
    "channel_breakdown": {  
      "google_ads": {"spend": 1500, "leads": 25, "quality_score": 0.78},  
      "linkedin": {"spend": 800, "leads": 15, "quality_score": 0.85},  
      "email": {"spend": 0, "leads": 7, "quality_score": 0.92}  
    },  
    "optimization_recommendations": [  
      "shift_20_percent_budget_to_linkedin",  
      "pause_underperforming_google_campaign_id_12345",  
      "increase_email_sequence_frequency"  
    ]  
  },  
  "trace_id": "uuid4",  
  "emergence": {  
    "signal": true,  
    "type": "performance_optimization",  
    "confidence": 0.91,  
    "threshold_metrics": {}  
  }  
}
```

## Integration Testing Scenarios:

- 1. Strategic Guidance Flow:** BRICK 1 sends campaign priorities → BRICK 2 adjusts targeting and budget allocation → confirms execution
- 2. Performance Feedback Loop:** BRICK 2 reports underperforming campaigns → BRICK 1 analyzes and provides optimization strategy → BRICK 2 implements changes
- 3. Emergency Response Protocol:** BRICK 1 detects budget overage or compliance issue → sends emergency\_pause → BRICK 2 halts campaigns immediately → confirms shutdown
- 4. Mode Toggle Validation:** System switches from human control to AI orchestration → all campaigns continue without disruption → human override remains available
- 5. Feature Flag Negotiation:** BRICK 1 queries BRICK 2 capabilities → BRICK 2 responds with available features → BRICK 1 adjusts strategy based on capabilities

#### **Milestone 6 Success Criteria:**

- UBIC v1.5 Compliance:** All 9 required endpoints respond correctly with proper error handling
- System Identity:** Registers as `brick2-marketing-engine` with correct capability declarations
- Incoming Message Processing:** Handles all message types correctly:
  - `strategic_guidance` - Updates campaign targeting and budget allocation
  - `optimization_directive` - Implements performance optimization instructions
  - `resource_allocation` - Redistributes budget across marketing channels
  - `emergency_pause` - Immediately halts all campaigns (<1 second response)

- Outgoing Message Generation:** Sends properly formatted messages:
  - `performance_report` - Comprehensive campaign metrics every 15 minutes
  - `lead_intelligence` - Qualified lead data with conversion insights
  - `optimization_recommendation` - Data-driven strategy suggestions
  - `resource_utilization` - Real-time spend and efficiency metrics
  - `anomaly_alert` - Unusual performance pattern notifications

- Feature Flag Implementation:** All required capabilities operational:

- `multi_platform_campaigns` - Google Ads, Facebook, LinkedIn integration
- `automated_lead_qualification` - ChatGPT-powered lead scoring
- `crm_integration` - HubSpot/Salesforce automated handoff
- `real_time_optimization` - Dynamic budget and bid adjustment
- `human_override_mode` - Manual control toggle functional
- `revenue_attribution` - End-to-end tracking operational
- `email_automation` - Sequence-based nurturing campaigns
- `social_outreach` - LinkedIn and social automation
- `conversation_ai` - Automated chat qualification
- `performance_analytics` - Real-time dashboard and reporting

- Priority Message Handling:** Proper response times by priority level:

- Emergency messages: <1 second response with immediate action
- High priority: <30 seconds response with execution confirmation
- Normal priority: <5 minutes response with status update
- Low priority: <15 minutes response with acknowledgment

- Message Format Compliance:** All messages include required UBIC fields:

- `idempotency_key`, `priority`, `source`, `target`, `message_type`
- `trace_id` for request tracking and debugging
- `emergence` fields with signal, type, confidence, threshold\_metrics

- Integration Testing Validation:** All scenarios pass successfully:

- Strategic guidance flow: BRICK 1 → campaign adjustment → execution confirmation
- Performance feedback loop: reporting → optimization → implementation → validation
- Emergency response: immediate campaign halt with confirmation
- Mode toggle: seamless human/AI transition without campaign disruption
- Feature flag negotiation: proper capability communication and adaptation

**JWT Authentication:** Secure Inter-BRICK communication with `brick_capabilities` claims

**Prometheus Metrics:** Standard UBIC monitoring endpoints expose campaign and system metrics

**Error Handling:** Graceful degradation and proper error responses for all failure scenarios

**Payment Trigger:** Complete BRICK 1 integration tested and validated with Fletcher's system, all UBIC v1.5 compliance requirements met, and successful execution of all integration testing scenarios with performance benchmarks achieved.

## Technical Requirements

### Development Environment

- **Primary Tools:** Cursor IDE with Composer, Claude Projects, GitHub Copilot
- **Backend:** FastAPI with PostgreSQL database
- **Frontend:** React with TypeScript
- **Deployment:** Docker containers with automated CI/CD
- **Testing:** Automated test suite with >80% coverage

### API Integrations Required

- **Google Ads API:** Campaign management and performance tracking
- **Facebook Ads API:** Ad creation and optimization
- **LinkedIn Ads API:** B2B campaign management
- **HubSpot API:** CRM integration and lead management
- **ChatGPT API:** Conversational lead qualification

### Platform Integrations

- **Clay.com:** Email sequence automation
- **PhantomBuster:** LinkedIn outreach automation
- **Make.com:** Workflow automation and CRM integration
- **Retool:** Analytics dashboard and reporting
- **Zapier:** System integrations and data flow

### Security & Compliance

- **API Security:** OAuth 2.0 authentication for all external services
- **Data Protection:** Encryption at rest and in transit
- **Rate Limiting:** Respect all platform API limits and implement backoff strategies
- **Error Handling:** Comprehensive error logging and recovery mechanisms

## Quality Assurance Standards

## Performance Requirements

- **API Response Time:** <500ms for all marketing operations
- **Dashboard Load Time:** <2 seconds for complete interface
- **Campaign Deployment:** <1 minute from creation to live status
- **Data Synchronization:** <5 minutes between systems
- **Uptime:** 99.5% availability during business hours

## Functionality Requirements

- **Cross-Platform Compatibility:** Works on Chrome, Firefox, Safari
- **Mobile Responsiveness:** Full functionality on tablets and smartphones
- **Data Accuracy:** 99%+ accuracy in tracking and attribution
- **User Experience:** Non-technical users can operate all features
- **Integration Reliability:** All external APIs handle failures gracefully

## Testing Requirements

- **Automated Testing:** Unit tests for all business logic
- **Integration Testing:** End-to-end workflow validation
- **Load Testing:** System handles 10x expected traffic
- **Security Testing:** Vulnerability assessment and penetration testing
- **User Acceptance Testing:** Validation by actual marketing users

## Final Deliverables

### System Components

- Complete marketing automation backend with API documentation
- Responsive web dashboard with user interface documentation
- Multi-platform campaign management system
- Automated lead qualification and CRM integration
- BRICK 1 integration layer with complete endpoint documentation
- Deployment package with infrastructure as code

### Documentation Package

- API documentation with example requests/responses
- User manual for dashboard operation
- Administrator guide for system maintenance
- BRICK 1 integration specifications and testing procedures
- Troubleshooting guide with common issues and solutions

## **Training Materials**

- Video tutorials for all major system functions
- Step-by-step campaign creation guide
- Performance optimization best practices
- System monitoring and maintenance procedures

## **Project Success Validation**

### **Overall Project Success Criteria:**

- System generates 50+ qualified leads per week within first week of operation
- Human operators achieve >3x ROI on advertising spend
- All platform integrations function reliably without manual intervention
- BRICK 1 integration endpoints validated and ready for AI orchestration
- System operates standalone without any external dependencies beyond API services
- Performance meets or exceeds all specified technical requirements

**Final Payment Trigger:** Complete system validation including one week of live operation with measurable business results and successful BRICK 1 integration testing.