eBuildify User Manual

Ghana's Premier Building Materials Delivery Platform

DCIT 208 Final Project Deliverable

Project Name: eBuildify - Building Materials E-commerce Platform

Team: BuildTech Solutions

Submission Date: August 22, 2025

Website URL: https://v0-ui-ux-design-project-iota.vercel.app/

GitHub Repository: https://github.com/enoch-amart/ebuildify_frontend.git

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1. Deployment & Installation

1.1 System Requirements

Hardware Requirements:

- **Server/Hosting:** Minimum 1GB RAM, 10GB storage space
- **Client Devices:** Any internet-connected device (desktop, tablet, mobile)
- **Internet Connection:** Minimum 1 Mbps recommended for optimal performance

Software Requirements:

- **Frontend Framework:** Next.js 14+ / React 18+
- **Runtime Environment:** Node.js 18.0 or higher
- **Package Manager:** pnpm 8.0+ (specifically required)
- **Web Browsers:** Chrome 90+, Firefox 88+, Safari 14+, Edge 90+
- **Development Tools:** Git, VS Code recommended

1.2 Installation Instructions

Option A: Live Website Access (Recommended for End Users)

1. Open your preferred web browser
2. Navigate to: `https://v0-ui-ux-design-project-iota.vercel.app/`
3. The application loads immediately without installation requirements
4. Consider bookmarking for convenient future access

Option B: Local Development Setup (For Developers)

Step 1: Repository Cloning

```
git clone https://github.com/enoch-amart/ebuildify_frontend.git
cd ebuildify_frontend
```

Step 2: Dependency Installation

```
pnpm install
```

Step 3: Environment Configuration

1. Create `.env.local` file in the root directory
2. Configure required environment variables:

```
NEXT_PUBLIC_API_URL=your_api_url_here
NEXT_PUBLIC_STRIPE_KEY=your_stripe_key_here
```

Step 4: Development Server Launch

```
pnpm dev
```

Step 5: Production Build Process

```
pnpm build
pnpm start
```

1.3 Deployment Configuration

Current Vercel Deployment:

- Hosted on Vercel platform with automatic GitHub integration
- Continuous deployment from main branch
- SSL certificate management and CDN optimization included
- Global performance optimization enabled

Alternative Deployment Methods:

- Netlify: Direct GitHub repository connection
- AWS Amplify: Next.js build configuration support
- Traditional hosting: Static build deployment option

2. System Features

2.1 Core E-commerce Functionality

Product Catalog Management

- Comprehensive building materials categorization (cement, iron rods, tiles, aggregates, timber, paints)
- Advanced search and filtering system
- Detailed product specifications with pricing and availability status
- High-resolution product imagery with zoom capabilities

Shopping Cart & Checkout Process

- Intuitive add/remove cart functionality
- Real-time quantity adjustments and price calculations
- Secure multi-payment option checkout system
- Comprehensive order summary and confirmation process

User Account System

- Streamlined registration and authentication
- Ghana Card verification integration for enhanced security
- Personal profile management with order history tracking
- Multiple delivery address management

2.2 Professional Construction Services

Architectural Services Integration

- **Professional Drawings:** Complete architectural plans, floor plans, elevations, and 3D rendering services
- **Quantity Estimation:** Automated material calculations based on project specifications
- **Cost Analysis:** Detailed project budgeting with comprehensive bill of quantities
- **Site Supervision:** Professional construction oversight and quality assurance services

Industry-Specific Tools

- Integrated material calculators for accurate project planning
- Automatic bulk ordering discounts (1.5% for orders exceeding 100 units)

- Specialized contractor dashboard with project management capabilities
- Extensive local supplier network integration across Ghana

2.3 Delivery & Logistics Management

Advanced Delivery System

- Same-day delivery service throughout Greater Accra region
- Real-time order tracking with status notifications
- Flexible delivery scheduling with preferred time slot selection
- Automated SMS and email delivery updates

Geographic Coverage

- Primary service area: Greater Accra region
- Progressive expansion to additional major cities
- Location-based pricing structure and delivery options
- Regional supplier network partnerships

2.4 Customer Support Infrastructure

Multi-language Capabilities

- Full interface support in English and Twi languages
- Bilingual customer service team
- Culturally adapted user experience for local market requirements

Comprehensive Support Channels

- 24/7 live chat functionality
- Dedicated phone support hotline
- Email ticketing system
- Extensive FAQ and documentation resources

2.5 Security & Trust Framework

Ghana Card Verification System

- Mandatory identity verification for all platform users
- Advanced fraud prevention and security measures
- Enhanced platform credibility and user trust

Quality Assurance Program

- Verified supplier network with certification requirements
- Product quality guarantees and warranties
- Comprehensive return and refund policy framework
- User review and rating system for transparency

3. Main Scenario Walkthrough: Complete Material Ordering Process

This comprehensive walkthrough demonstrates the platform's primary functionality through a typical customer journey involving building materials procurement for construction projects.

3.1 Scenario Overview

User Profile: John, an experienced contractor managing a residential construction project in Accra
Objective: Procure cement, iron rods, and tiles for foundation construction phase
Estimated Duration: 15-20 minutes for complete transaction

3.2 Detailed Process Execution

Step 1: Platform Access

1. Launch web browser and navigate to `https://v0-ui-ux-design-project-iota.vercel.app/`
2. **System Response:** Homepage displays with eBuildify branding, navigation structure, and featured product sections
3. **Visual Context:** Main landing page showcasing "Ghana's Premier Building Materials Delivery Platform" messaging

Step 2: Account Registration Process

1. Select "Sign Up" from primary navigation menu
2. Complete registration form including:
   - Full legal name
   - Valid email address
   - Contact phone number
   - Ghana Card identification number for verification
3. Submit registration request
4. **System Response:** Verification email dispatch and successful account creation confirmation
5. **Visual Context:** Registration interface displaying Ghana Card verification requirement

Step 3: Product Category Navigation

1. Access "Categories" from main navigation menu
2. Select "Cement" from available category options

3. **System Response:** Product listing interface displaying available cement varieties with current pricing
4. **Visual Context:** Categorized product display with sidebar filtering options

Step 4: Product Selection and Cart Management

1. Select "Dangote Cement 50kg" from product listing
2. Review detailed product specifications and current price (GHS 45.00)
3. Specify quantity requirement: 20 bags
4. Execute "Add to Cart" action
5. Return to categories and repeat process for:
   - Iron Rods 12mm specification (10 pieces)
   - Floor Tiles 60x60cm dimensions (50 pieces)
6. **System Response:** Cart counter updates reflect added items with confirmation messages
7. **Visual Context:** Product detail pages showing comprehensive specifications and purchase options

Step 5: Cart Review and Pricing Calculation

1. Access shopping cart via header cart icon (displaying current item count)
2. Review all selected products with quantities and individual pricing
3. System applies automatic contractor discount (1.5% for qualifying bulk orders)
4. **System Response:**
   - Subtotal calculation: GHS 2,840.00
   - Applied discount: GHS 42.60
   - Final total: GHS 2,797.40
5. **Visual Context:** Comprehensive cart interface with itemized pricing breakdown

Step 6: Checkout Process Initiation

1. Select "Proceed to Checkout" option
2. Verify delivery address within Accra service area
3. Choose delivery method: "Same-day delivery (GHS 50)"
4. Select payment option: "Mobile Money (MTN)"
5. **System Response:** Order summary displaying final pricing including delivery charges
6. **Visual Context:** Checkout interface presenting delivery and payment method selections

Step 7: Payment Processing

1. Input MTN Mobile Money contact number
2. Select "Complete Order" to initiate payment

3. Respond to mobile device payment authorization prompt
4. Complete transaction using MTN MoMo PIN verification
5. **System Response:**
   - Payment confirmation display
   - Order reference generation (e.g., #EB2025082200123)
   - Automatic confirmation email dispatch
6. **Visual Context:** Payment confirmation screen with complete order details

Step 8: Order Tracking Access

1. Navigate to "My Orders" within user dashboard
2. Select recent order #EB2025082200123 for detailed tracking
3. Monitor real-time order status updates
4. **System Response:**
   - Current status: "Confirmed - Preparing for delivery"
   - Delivery estimate: Same day, 2-4 PM window
   - SMS notification confirmation
5. **Visual Context:** Order tracking interface with delivery timeline visualization

3.3 Scenario Outcome Analysis

This walkthrough effectively demonstrates eBuildify's solution to traditional building materials procurement challenges in Ghana by providing:

- Streamlined online access to verified supplier networks
- Transparent pricing with automatic bulk discount applications
- Reliable same-day delivery within Greater Accra coverage area
- Enhanced security through mandatory Ghana Card verification processes

4. Additional Scenarios

4.1 Professional Services Request Scenario

Context: Sarah, a licensed architect, requires technical architectural drawings for a client's residential development project.

Process Execution:

1. **Professional Services Access**
   - Navigate to "Services" menu section
   - Select "Professional Services" option
   - **System Response:** Services overview displaying architectural, estimation, and supervision service categories
2. **Service Request Submission**
   - Select "Architectural Services" from available options
   - Upload project requirement documentation
   - Complete detailed service request form:
     - Project classification: Residential construction
     - Building specifications: 4-bedroom residential structure
     - Required deliverables: Floor plans, architectural elevations, 3D rendering visualizations
   - **System Response:** Service request successfully submitted for professional review
3. **Quote Generation and Project Acceptance**
   - Professional review completed within 24-hour timeframe
   - Service quotation provided: GHS 2,500 for complete architectural service package
   - Client quote acceptance and payment processing
   - **System Response:** Project initiation with established timeline (7-10 business days completion)

Application Context: This scenario addresses situations where customers require comprehensive professional construction services beyond standard materials procurement.

4.2 Large-Scale Contractor Bulk Ordering Scenario

Context: Mike, a major construction contractor, manages multiple simultaneous projects requiring coordinated material deliveries with specific scheduling requirements.

Process Execution:

1. **Contractor Dashboard Access**
   - Login through verified contractor account credentials
   - Access specialized "Bulk Orders" section
   - **System Response:** Contractor-specific interface optimized for large-scale ordering operations
2. **Multi-Project Delivery Coordination**
   - Configure Project A: 500 cement bags (Monday 9 AM delivery)
   - Configure Project B: 200 iron rods (Wednesday 2 PM delivery)
   - Configure Project C: 1000 concrete blocks (Friday 10 AM delivery)
   - **System Response:** Multi-delivery order system with individual project tracking capabilities
3. **Contractor Benefit Application**
   - Automatic bulk discount calculation (1.5% applied)
   - Extended payment terms qualification (30-day net payment)
   - Priority customer service access assignment
   - **System Response:**
     - Total discount savings: GHS 450
     - Payment terms: Net 30 business days
     - Dedicated account manager assignment

Application Context: Large-scale contractors managing multiple concurrent projects with complex material delivery coordination requirements.

Conclusion

This user manual provides comprehensive operational guidance for eBuildify, Ghana's leading building materials delivery platform. The system addresses critical challenges within Ghana's construction industry through:

- **Industry Digitization:** Transformation from traditional procurement methods to efficient online ordering systems
- **Trust Infrastructure:** Ghana Card verification ensuring platform security for all users
- **Local Market Expertise:** Deep understanding of Ghanaian construction industry requirements
- **Service Integration:** Comprehensive material procurement combined with professional construction services

Post-User Acceptance Testing Improvements:

- Enhanced mobile device responsiveness based on user feedback analysis
- Streamlined checkout process reducing cart abandonment rates
- Implementation of Twi language support addressing local user requirements
- Improved search functionality incorporating local product terminology

The platform effectively serves both individual customers and large-scale contractors, providing scalable solutions for Ghana's expanding construction sector requirements.

Technical Support Contact Information:

- Email: amarteifioenoch4@gmail.com
- Phone: +233 54 297 2982
- Live Chat: 24/7 website availability

System Maintenance Protocol:

- Automated update deployment via Vercel platform
- Daily database backup procedures
- Continuous security monitoring with automatic SSL certificate renewal