

BMAD Complete Project Documentation

constructon - Modern Villa Construction Website

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Part 1: Brainstorming Session Results

Session Date: 2025-12-14 **Techniques Used:** Role Playing, Cross-Pollination, Six Thinking Hats

Session Overview

Topic: How to attract villa customers in Zimbabwe

Goals:

1. Define a clear, compelling value proposition
2. Identify marketing angles that resonate with the target audience
3. Generate website features that convert visitors to leads
4. Map the complete customer journey from discovery to purchase

Phase 1: Customer Personas

Persona 1: The Diaspora Returner

- **Who:** 40s professional, successful abroad (UK, US, SA, Australia)
- **Wants:** Status symbol, "I made it" validation, quality assurance
- **Fears:** Cheap materials, disappearing contractors, "local-looking" result, overseas scams
- **Core Need:** TRUST + TRANSPARENCY from a distance
- **Marketing Angle:** "Western quality, Zimbabwe built"

Persona 2: The Local High-Achiever

- **Who:** Successful professional/business owner already in Zimbabwe
- **Wants:** Modern designs that stand out locally, trendsetter status
- **Desires:** Minimalist lines, glass walls, infinity pools, rooftop areas
- **Key Differentiator:** Smart home tech (voice control, automation)
- **Marketing Angle:** "The only smart home builder in Zimbabwe"

Persona 3: The Young Power Couple

- **Who:** Late 20s/early 30s professionals, first-time builders
- **Wants:** Affordable BUT stylish starter villa

- **Barriers:** Financing, finding land, trusting the process
- **Marketing Angle:** "Starter Villa" product line

Persona 4: The Investor

- **Who:** Diaspora or local buying for multiple purposes
- **Wants:** Live in + Rental income + Asset appreciation
- **Needs:** Turnkey solutions, property management connections, ROI proof
- **Marketing Angle:** Position villas as "wealth-building assets"

Phase 2: Cross-Pollination Ideas

Industry	Key Steal	Impact
Hospitality	Virtual tours + lifestyle imagery	Builds desire
Automotive	Configurator + product tiers	Makes buying easy
Real Estate Tech	Progress tracker + testimonials	Builds trust
Luxury Goods	Exclusivity + community	Creates status

Phase 3: Customer Journey Mapping

Stage 1: DISCOVER

- Channels: Instagram, Facebook, TikTok, Google, Word of mouth
- First Impression Goal: "Wow, this exists in Zimbabwe?!"

Stage 2: EXPLORE

- Must-Haves: Stunning villa photos, clear pricing, easy contact
- Emotion: Inspired, confident

Stage 3: CONSIDER

- Questions to Answer: Quality guarantees, contractor credentials, build timeline
- Proof Needed: Testimonial videos, completed gallery, guarantees

Stage 4: DECIDE

- Triggers: Limited time offers, easy financing
- Conversion Boosters: "Only 5 slots remaining", early-bird pricing

Stage 5: BUILD

- Communication: Weekly video updates via Build Tracker + WhatsApp

Stage 6: RECEIVE

- Handover Experience: Champagne ceremony, professional photos

Value Proposition

"Western-quality smart villas, built in Zimbabwe with complete transparency"

Part 2: Product Requirements Document

Executive Summary

constructon is a digital platform for a modern villa construction company bringing Western-style architecture and smart home technology to Zimbabwe. The website serves as the primary customer acquisition and engagement channel.

Vision

To become Zimbabwe's premier modern villa builder by combining international design standards, smart home technology, and unprecedented transparency.

The Problem We Solve

1. **Trust Gap:** Customers fear being scammed by contractors
2. **Design Gap:** No local builder offers truly modern, Western-style villa designs
3. **Technology Gap:** Smart home features are virtually non-existent locally
4. **Transparency Gap:** Most builders hide pricing and provide poor communication

Target Users

Persona	Description	Primary Need
Diaspora Returner	40s professionals abroad	Trust & transparency from overseas
Local High-Achiever	Successful professionals	Modern design & smart tech
Young Power Couple	First-time builders	Affordable stylish starter
Investor	Buyers seeking ROI	Turnkey solutions & ROI proof

Success Criteria

User Success

- User views 3+ villa plans in a session
- User uses financing calculator or sees full pricing
- User saves/favorites a plan OR starts configuration
- User initiates contact (WhatsApp, form, call)

Business Success

Metric	3-Month Target	12-Month Target
Leads per month	50	150+
Visitor → Lead conversion	3%	5%
Monthly website visitors	1,700+	5,000+

Technical Success

Requirement	Target
Page load speed	< 3 seconds on 3G mobile
Mobile responsiveness	100% mobile-first design
Uptime	99.5% availability

Product Scope

MVP Features

Feature	Priority
Villa Plans Gallery	Critical
Clear Pricing	Critical
Financing Calculator	Critical
Contact Options	Critical
Mobile-Optimized	Critical
About/Trust Section	High

Post-MVP Features

Feature	Value
Villa Configurator	High engagement
3D Virtual Tours	Trust builder
Client Testimonials	Social proof
Build Tracker Dashboard	Diaspora trust
Rental Yield Calculator	Investor conversion

Functional Requirements

Villa Discovery & Showcase (7 FRs)

- FR1: Browse gallery of villa plans
- FR2: View high-quality photos
- FR3: View floor plans
- FR4: Filter by tier (Starter, Executive, Signature)
- FR5: View smart home features
- FR6: View completed projects gallery
- FR7: View detailed specifications

Pricing & Financial Tools (5 FRs)

- FR8: See pricing on every villa plan

- FR9: Use financing calculator
- FR10: Input deposit amount
- FR11: See monthly payment messaging
- FR12: View promotional offers

Lead Capture & Communication (6 FRs)

- FR13: WhatsApp button from any page
- FR14: Submit inquiry form
- FR15: Find phone number
- FR16: Request site visit
- FR17: Request customization options
- FR18: Lead source attribution

Trust & Credibility (7 FRs)

- FR19: View company story
- FR20: View team profiles with credentials
- FR21: View video introductions
- FR22: Read client testimonials
- FR23: See "construction Verified" badge
- FR24: View diaspora program information
- FR25: Understand build process

Content & Resources (6 FRs)

- FR26: Access guides and FAQ
- FR27: View investment package info
- FR28: View ROI projections
- FR29: View land partnership information
- FR30: Learn about smart home technology
- FR31: View villa tier comparisons

Site Foundation & SEO (6 FRs)

- FR32: Search engine crawlability
- FR33: Social media sharing with rich previews
- FR34: Mobile device accessibility
- FR35: Keyboard navigation
- FR36: Screen reader support
- FR37: Page load under 3 seconds

Analytics & Tracking (4 FRs)

- FR38: Track visitor behavior
- FR39: Track lead conversion events
- FR40: Measure time on villa pages
- FR41: Identify return visitors

Total: 41 Functional Requirements

Non-Functional Requirements

Performance

- FCP < 1.5 seconds

- LCP < 2.5 seconds
- TTI < 3.5 seconds
- CLS < 0.1
- Page weight < 2MB

Security

- HTTPS (TLS 1.2+)
- CSRF protection
- Input validation
- Strong admin authentication

Accessibility

- WCAG 2.1 Level AA
- 4.5:1 color contrast minimum
- Keyboard navigation
- Screen reader support

Part 3: UX Design Specification

Executive Summary

Project Vision

constructon is Zimbabwe's first modern villa construction company website, designed to attract and convert customers seeking Western-style smart villas.

Key Design Challenges

1. Mobile-first performance on 3G connections
2. Trust architecture built into every interaction
3. Multi-persona navigation for 4 distinct user types
4. Pricing visibility without overwhelming
5. Prominent WhatsApp integration

Core User Experience

Defining Experience

"See it. Afford it. WhatsApp it."

The defining constructon experience is a three-beat emotional journey:

1. Visual desire (browse stunning villas)
2. Financial possibility (calculate affordability)
3. Confident action (WhatsApp with context)

Platform Strategy

Platform	Approach
Primary	Mobile Web (Responsive)

Architecture	SSR/Hybrid for SEO + Performance
Input	Touch-first, thumb-zone optimized
Native Features	WhatsApp deep links, click-to-call

Experience Principles

1. **Transparency First** — Show everything, hide nothing
2. **Mobile Thumb Zone** — Critical CTAs within natural thumb reach
3. **Visual Before Text** — Imagery leads, copy supports
4. **Zero-Friction Contact** — WhatsApp always 1 tap away
5. **Speed is Trust** — Sub-3-second loads on 3G

Visual Design Foundation

Color System

Role	Name	Hex	Usage
Primary	Slate Blue	#1E3A5F	Headers, navigation
Accent	Warm Gold	#C9A227	Premium highlights
WhatsApp CTA	Green	#25D366	Primary action

Tier Colors

Tier	Hex	Feeling
Starter	#0D9488	Fresh, accessible
Executive	#1E3A5F	Professional
Signature	#C9A227	Premium, exclusive

Typography

- Headlines: Playfair Display (serif)
- Body: Inter (sans-serif)

Design System

Selected: Tailwind CSS + shadcn/ui

Component Type	Location
UI primitives	components/ui/
Villa-specific	components/villa/
Calculator	components/calculator/
Contact	components/contact/

Custom Components Required

Component	Purpose
VillaCard	Display villa in list/grid
TierBadge	Visual tier indicator
FinancingCalculator	Affordability calculation
StickyAffordabilityBar	Persistent conversion CTA
TrustBadge	Credibility signals
PhotoGallery	Villa imagery
WhatsAppButton	Primary contact CTA
TeamProfileCard	Team member display

User Journey Flows

Journey 1: Villa Discovery

Entry → Trust Hero → Villa List → Card → Detail → Calculator/WhatsApp

Journey 2: Calculate Affordability

See Price → Enter Deposit → See "YOUR" Payment → WhatsApp

Journey 3: WhatsApp Contact

Tap → App Opens → Pre-filled Message → Send

Journey 4: Trust Validation

Trust Badges → Team Page → Video Intros → Completed Projects

Responsive Strategy

Breakpoints

Breakpoint	Target
Mobile (320-767px)	Primary - 70%+ traffic
Tablet (768-1023px)	High
Desktop (1024px+)	High

Accessibility

- WCAG 2.1 Level AA compliance
- 4.5:1 color contrast minimum
- 44x44px minimum touch targets
- Visible focus states

- Screen reader compatible
-

Part 4: Architecture Decision Document

Project Context Analysis

Requirements Overview

Category	Count	Architectural Implication
Villa Discovery	7	Content-heavy pages, image optimization
Pricing & Financial	5	Client-side calculator
Lead Capture	6	Form handling, WhatsApp deep links
Trust & Credibility	7	Video embedding, CMS-driven content
Content & Resources	6	Static/SSG pages
Site Foundation & SEO	6	SSR mandatory
Analytics & Tracking	4	Event layer, conversion tracking

Technical Constraints

Constraint	Impact
SSR required	Framework must support SSR
3G performance	Aggressive image optimization
Mobile-first	Touch-optimized
WhatsApp primary CTA	Deep link integration

Selected Technology Stack

Layer	Choice	Rationale
Framework	Next.js 16	SSR + static generation
Styling	Tailwind CSS + shadcn/ui	Mobile-first, accessible
CMS	Sanity	Free tier, excellent image handling
Hosting	Vercel	Edge CDN, auto-scaling
Analytics	GA4 + Meta Pixel	Conversion tracking

Core Architectural Decisions

Data Architecture

Decision	Choice
CMS	Sanity
Validation	Zod
Caching	Next.js ISR

Frontend Architecture

Decision	Choice
State Management	React Context + useAffordability hook
Component Structure	UX spec component tree
Routing	App Router file-based
Bundle Strategy	Route-based code splitting

Infrastructure

Decision	Choice
Hosting	Vercel
CI/CD	Vercel Git Integration
Environments	Preview + Production

Implementation Patterns

Naming Conventions

Type	Convention	Example
Components	PascalCase	VillaCard.tsx
Hooks	camelCase with use	useAffordability.ts
Utils	camelCase	formatCurrency.ts
Server Actions	camelCase with Action	submitInquiryAction.ts

Project Structure

```

src/
├── app/                      # Next.js App Router pages
├── components/
│   ├── ui/                   # shadcn components
│   ├── villa/                # Villa-specific
│   ├── calculator/           # Calculator components
│   ├── trust/                # Trust components
│   └── contact/              # Contact components

```

```

|   └── layout/      # Layout components
|   └── lib/
|   |   └── sanity/    # CMS integration
|   |   └── utils.ts     # Utilities
|   |   └── whatsapp.ts  # WhatsApp URL builder
|   └── hooks/        # Custom hooks
|   └── actions/       # Server Actions
└── providers/       # Context providers

```

Architecture Validation

Requirements Coverage

FR Category	Covered	Status
Villa Discovery	7/7	Complete
Pricing & Financial	5/5	Complete
Lead Capture	6/6	Complete
Trust & Credibility	7/7	Complete
Content & Resources	6/6	Complete
Site Foundation & SEO	6/6	Complete
Analytics & Tracking	4/4	Complete
Total	41/41	100%

Part 5: Epic & Story Breakdown

Epic Overview

Epic 1: Site Foundation & Homepage

Visitors can access a fast, mobile-friendly, professional website with navigation and a compelling homepage.

FRs covered: FR34, FR35, FR36, FR37

Stories:

- 1.1: Initialize Next.js Project
- 1.2: Create Root Layout with Header/Footer
- 1.3: Build Mobile Navigation
- 1.4: Create Homepage with Hero Section

Epic 2: Villa Discovery & Showcase

Visitors can browse villa plans, view photos and floor plans, filter by tier, and explore features.

FRs covered: FR1, FR2, FR3, FR4, FR5, FR7, FR32, FR33

Stories:

- 2.1: Set Up Sanity CMS with Villa Schema
- 2.2: Create Sanity Client and Type-Safe Queries
- 2.3: Create Villa Listing Page
- 2.4: Create Villa Detail Page
- 2.5: Build Photo Gallery with Swipe Support
- 2.6: Implement Tier Filtering
- 2.7: Add SEO and Social Sharing

Epic 3: Pricing & Financial Tools

Visitors can see transparent pricing and calculate monthly payments.

FRs covered: FR8, FR9, FR10, FR11, FR12

Stories:

- 3.1: Create Formatting Utilities and Calculator Logic
- 3.2: Implement AffordabilityProvider
- 3.3: Display Pricing on Cards and Detail Pages
- 3.4: Build Financing Calculator
- 3.5: Create StickyAffordabilityBar
- 3.6: Add Monthly Payment Messaging

Epic 4: Lead Capture & Communication

Visitors can contact construction via WhatsApp, form, or phone.

FRs covered: FR13, FR14, FR15, FR16, FR17, FR18

Stories:

- 4.1: Create WhatsApp URL Builder
- 4.2: Build WhatsApp Button with CVA Variants
- 4.3: Add WhatsApp to Header and StickyBar
- 4.4: Create Contact Page
- 4.5: Build Inquiry Form with Server Action
- 4.6: Implement Lead Source Attribution

Epic 5: Trust & Credibility

Visitors can verify legitimacy through company story, team profiles, and testimonials.

FRs covered: FR19, FR20, FR21, FR22, FR23, FR24, FR25

Stories:

- 5.1: Create Sanity Schemas for Team/Testimonials
- 5.2: Build About Page
- 5.3: Create Team Page with Profile Cards
- 5.4: Implement Video Introductions
- 5.5: Build Testimonials Section
- 5.6: Create TrustBadge Component
- 5.7: Build Process Transparency Section

Epic 6: Content & Resources

Visitors can learn about building, investing, and smart home technology.

FRs covered: FR6, FR26, FR27, FR28, FR29, FR30, FR31

Stories:

- 6.1: Create Completed Projects Schema
- 6.2: Build Completed Projects Gallery
- 6.3: Create FAQ Page
- 6.4: Build Investment Information Section
- 6.5: Create ROI Projections Display
- 6.6: Build Land Partnership Information
- 6.7: Create Smart Home Showcase
- 6.8: Build Villa Tier Comparison

Epic 7: Analytics & Optimization

Business can track visitor behavior and conversion events.

FRs covered: FR38, FR39, FR40, FR41

Stories:

- 7.1: Create Analytics Utilities
- 7.2: Implement GA4 Integration
- 7.3: Implement Meta Pixel Integration
- 7.4: Create AnalyticsProvider
- 7.5: Track Conversion Events
- 7.6: Track Villa Engagement Metrics
- 7.7: Identify Return Visitors

Summary

This document contains the complete BMAD methodology output for the construction project:

1. **Brainstorming Session** - Customer personas, cross-industry insights, journey mapping
2. **PRD** - 41 functional requirements, success criteria, user journeys
3. **UX Design** - Visual design, components, interaction patterns
4. **Architecture** - Technology stack, patterns, project structure
5. **Epics** - 7 epics with 40+ implementation stories

Total Requirements: 41 Functional + 32 Non-Functional = 73 Requirements **Total Epics:** 7 **Total Stories:** 40+

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