

PART 1

BACHELOR IN
BUSINESS SYSTEMS
WEB DEVELOPMENT
(WEDE5020)

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Proposal 1: EcoHarvest Farms

1. Organisation Overview

The EcoHarvest Farms website project aims to create a comprehensive digital platform for a sustainable agriculture business based in Stellenbosch, South Africa. This project will serve as both an e-commerce solution for their organic produce and an educational resource about sustainable farming practices. The website will feature responsive design, accessible content, and robust functionality to meet the needs of various stakeholders including customers, partners, and community members.

Vision Statement

"To transform the agricultural landscape of South Africa by 2030 through innovative sustainable farming techniques that restore ecosystems while providing nutritious, organic food to local communities. We envision becoming the leading model for regenerative agriculture in Africa, where every hectare of farmland contributes positively to environmental restoration and community wellbeing."

Mission Statement

EcoHarvest Farms is committed to:

1. Producing certified organic food using methods that regenerate soil health and protect biodiversity

2. Educating farmers and consumers about sustainable agriculture through workshops and digital resources
3. Building a transparent food system where consumers know exactly how and where their food is grown
4. Partnering with local communities to create shared value through employment and skills development
5. Continuously improving our environmental impact through research and innovation

2. Website Goals and Objectives

Primary Goals:

1. Showcase the farm's sustainable practices and products.
2. Increase online sales of organic produce.
3. Educate visitors about sustainable agriculture.

Key Performance Indicators (KPIs):

- Achieve a 25% increase in online sales within 6 months.
- Grow website traffic by 40% through SEO and social media (Frick, 2020)
- Secure partnerships with five local restaurants.

3. Current Website Analysis

Strengths

1. **Visual Branding** - The existing colour scheme (earth tones) effectively communicates the organic nature of the business
2. **Basic Information Architecture** - Key sections are logically organized
3. **Contact Information** - Clearly displayed phone numbers and email addresses

Weaknesses

1. **Outdated Technology Stack**
 - No mobile responsiveness
2. **Poor Performance Metrics**
 - Average load time of 5.8 seconds
3. **Lacking Critical Features**
 - No e-commerce functionality
 - No blog/content management system (Krug, 2014)

4. Proposed Website Features and Functionality

Essential Pages:

1. Homepage

- Hero section with seasonal promotion
- Featured product carousel
- Upcoming events calendar
- Trust indicators (certifications, etc)

2. About Us

- Interactive farm timeline
- Team member profiles with credentials
- Mission/vision animated infographic

3. Shop

- Product catalogue with filtering (by type, price, availability)
- Product detail pages with:
 - High-resolution image gallery
 - Detailed farming practices
 - Nutritional information
 - Recipe suggestions
- Cart and checkout system

4. Sustainability

- Farming practices documentation
- Environmental impact dashboard

5. Contact Us

- Contact form with CAPTCHA
- Interactive map with all farm locations
- Business hours with holiday exceptions
- FAQ knowledge base

Technical Features

1. User Accounts

- Customer registration/login
- Order history tracking
- Wishlist functionality

2. Backend Systems

- Inventory management integration

- Order processing workflow

3. Marketing Tools

- Email automation setup
- Abandoned cart recovery
- Product review system

5. Design and User Experience

Colour Scheme:

- Primary: Green (#388E3C) and Beige (#F5F5DC).
- Secondary: Brown (#8B4513) and White (#FFFFFF).

Typography:

- Headings: "Playfair Display" (Bold).
- Body Text: "Lato" (Regular).

Layout and Design:

- Warm, earthy tones to reflect the farm's natural aesthetic.
- Use of high-quality images of produce and farm life.

User Experience Considerations:

- Easy-to-navigate menu with dropdowns for shop categories.
- Mobile-friendly design for seamless browsing (Krug, 2014)

6. Technical Requirements

Frontend Development

- HTML5
- CSS
- JavaScript

Backend Development

- Database: MySQL 8.0
- Authentication: JWT tokens
- API Endpoints: RESTful design

Hosting Infrastructure

- Server: AWS EC2 t3.medium instance
- Storage: S3 for media assets
- CDN: Cloudflare for global delivery

- DNS: Route 53 with DNSSEC

Security Measures

- SSL/TLS encryption (Let's Encrypt)
- Web Application Firewall (WAF)
- Daily automated backups
- DDoS protection

Third-Party Integrations

- PayFast payment gateway
- Google Maps API
- Mailchimp for email
- Google Analytics 4 (MDN Web Docs, 2023)

7. Timeline and Milestones

Phase 1: Planning & Design

- Finalize project requirements - 28 Feb
- Create wireframes - 5 Mar
- Design mock-ups - 10 Mar
- Client approval - 15 Mar

Phase 2: Development

- HTML/CSS templates - 22 Mar
- JavaScript functionality - 29 Mar
- Backend integration - 5 Apr
- Content population - 12 Apr

Phase 3: Testing & Deployment

- Cross-browser testing - 18 Apr
- Performance optimization - 22 Apr
- Security audit - 26 Apr
- Final deployment - 30 Apr

Final Submission

- Complete POE documentation - 5 May 2025

8. Budget

Development Costs (ZAR 58,450)

- **Frontend Development:** R32,000
 - Homepage template: R8,000
 - Product pages: R12,000
 - Interactive components: R12,000
- **Backend Development:** R18,000
 - API development: R10,000
 - Database design: R5,000
 - Payment integration: R3,000
- **Testing:** R8,450
 - QA testing: R5,000
 - Security testing: R3,450

Hosting & Infrastructure (ZAR 12,300/year)

- AWS EC2 instance: R6,000/year
- S3 storage: R1,200/year
- Domain registration: R300/year
- SSL certificate: R1,800/year
- CDN services: R3,000/year

Maintenance (ZAR 3,450/month)

- Software updates: R1,500
- Security monitoring: R1,200
- Content updates: R750

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