

# TANG TECH WEBSITE

This document serves as a comprehensive guide for the **Tang Tech Website** project, outlining its objectives, features, technical specifications, and implementation plan. It provides a structured roadmap for the development, deployment, and maintenance of the platform, ensuring clarity for all stakeholders involved

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Prepared for  
**Tang Tech & Engineering Ltd**



# PROJECT DOCUMENTATION

## 1. PROJECT OVERVIEW

### 1.1 Project Name:

Tang Tech & Engineering Website

### 1.2 Project Description:

The Tang Tech Website is a modern digital platform designed to showcase Tang Tech & Engineering Ltd's expertise in electrical services, automation, ICT solutions, and security systems. It provides a seamless user experience for customers to explore services, browse products, register for training, and engage with the company through inquiries and support.

The platform includes an interactive admin panel for managing services, products, customer interactions, and orders efficiently. With a secure and scalable architecture, the website ensures real-time updates and data-driven insights.

### 1.3 Objectives:

- Provide an online presence for Tang Tech & Engineering Ltd.
- Offer detailed information about products and services, including electrical, automation, ICT, and security solutions.
- Enable customers to make inquiries and engage with the company online.
- Allow the admin to manage services, products, orders, and messages efficiently.

## **2. PROJECT SCOPE**

### **2.1 Features for Users (Client's website):**

- Comprehensive Service Listings – Browse detailed information on electrical, automation, ICT, and security solutions.
- Product Catalog – View available electrical and automation products with specifications and pricing.
- Training Programs – Explore professional training opportunities in engineering and technology fields.
- Company Information & Partners – Learn about Tang Tech's mission, expertise, and strategic partnerships.
- User Registration & Login – Create an account to access personalized services and track interactions.
- Contact & Location Details – Get company's contact information and find physical office locations.

Responsive & Mobile-Friendly Design – Ensure seamless access across all devices.

### **2.2 Features for Admin Panel:**

- Dashboard for Key Metrics (Orders, Messages, Services, Products)
- User & Customer Management
- Order Processing & Status Updates
- Service & Product Management (Create, Update, Delete)
- Message Center for Customer Communication

### 3. TECHNICAL SPECIFICATIONS

#### 3.1 Technology Stack

- **Frontend:** React.js (Material UI for UI components)
- **Backend:** Node.js with Express.js
- **Database:** MongoDB (Mongoose ODM)
- **Authentication:** JWT Authentication
- **Hosting & Deployment:** Netlify (Frontend), Render (Backend)
- **Analytics & Monitoring:** Google Analytics

### 4. SYSTEM ARCHITECTURE

#### 4.1 Overview of the Architecture:

- **Frontend:** Single-page application (SPA) using React.js
- **Backend:** RESTful API handling business logic and database interactions
- **Database:** NoSQL database for storing user data, services, orders, and messages
- **Authentication:** JWT-based user authentication

### 5. IMPLEMENTATION PLAN

#### 5.1 Development Phases:

- 1) Planning & Requirement Analysis
- 2) UI/UX Design
- 3) Frontend Development
- 4) Backend Development
- 5) Database Setup & API Development
- 6) Integration & Testing
- 7) Deployment & Monitoring
- 8) Maintenance

## 6. SECURITY CONSIDERATIONS

- Data encryption for sensitive user information
- Secure authentication & authorization mechanisms
- Role-based access control (RBAC) for admin and users

## 7. GLOSSARY / TERMINOLOGY

This section defines key abbreviations and technical terms used throughout the document for clarity and reference.

**SPA:** Single Page Application

**RBAC:** Role-Based Access Control

**ODM:** Object Document Mapper

**UI:** User Interface

**UX:** User Experience

**API:** Application Programming Interface

**CRUD:** Create, Read, Update, Delete

**JWT:** JSON Web Token

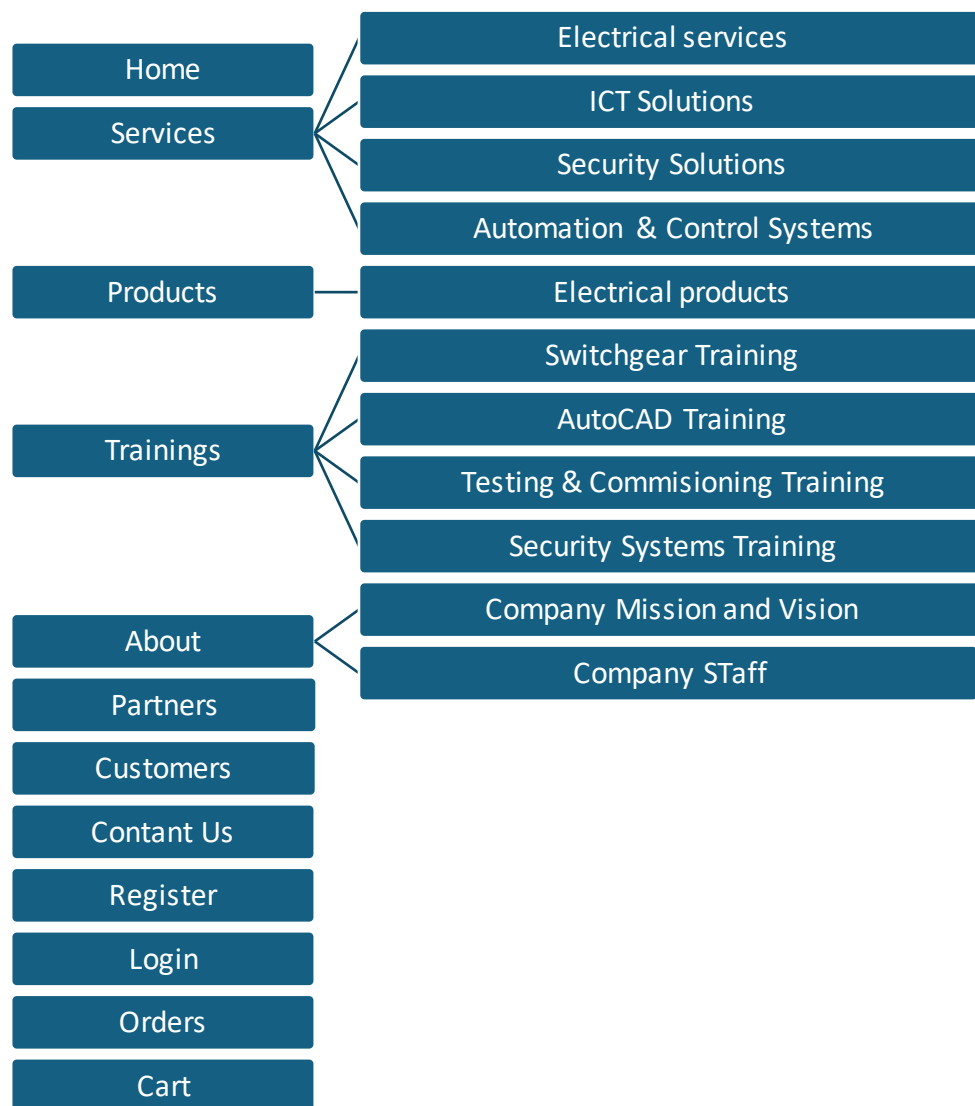
## 8. APPENDIX

This section includes supporting materials that provide additional context and reference for the contents of this documentation.

### 8.1 Sitemap of the website (Client Website)

This sitemap illustrates the hierarchical structure of the website, outlining the main pages and their relationships to provide a clear overview of the site's navigation flow.

LINK: <https://tangtech.netlify.app/>



## 8.2 Sitemap of the Admin Panel Website

This sitemap illustrates the hierarchical structure of the admin panel, outlining the main pages and their relationships to provide a clear overview of the site's navigation flow.

LINK: <https://tangtech-admin.netlify.app/>

