DMAT (Digital Marketing Automation Tool) - Use Cases & Implementation Guide

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Project: Digital Marketing Automation Tool
Tech Stack: React, Node.js/Python, SQL Server, GitHub

Introduction

The Digital Marketing Automation Tool (DMAT) is a comprehensive platform designed to help marketers automate their campaigns, manage leads, track performance, and optimize marketing spend across multiple channels. This document provides detailed use cases, technical architecture, implementation roadmap, and success metrics for the DMAT platform.

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Project Overview

Vision

Build a comprehensive Digital Marketing Automation platform that enables marketers to:

- Create and manage landing pages
- Capture and score leads automatically
- Automate multi-channel campaigns
- Schedule social media posts
- Track analytics and return on investment (ROI)
- Integrate with WordPress and third-party platforms

Target Users

The DMAT platform serves the following user segments:

- Marketing managers overseeing campaigns and budgets
- Digital marketers executing campaigns
- Marketing teams in SMBs and enterprises
- E-commerce businesses seeking to drive conversions
- Sales organizations managing qualified leads

Core Technology Stack

Component	Technology
Frontend	React + Vite
Backend	Node.js + Express
Database	SQL Server / MySQL
Repository	GitHub
Integrations	WordPress, Instagram, LinkedIn, Google Analytics
File Storage	Images, PDFs (File Storage System)

Table 1: DMAT Technology Stack

Use Cases (10 Core Scenarios)

Use Case 1: Lead Generation and Nurturing Workflows

Description:

Capture leads from landing pages, automatically segment them, and nurture through personalized email sequences based on behavior.

Actors:

- Marketing Manager (creates campaigns)
- System (executes automation)
- Sales Team (receives qualified leads)

Main Flow:

1. Marketing manager creates landing page in WordPress dashboard
2. Landing page goes live with form fields (name, email, phone, company)
3. Visitor fills form → Lead captured in DMAT database
4. System automatically:
   - Sends welcome email
   - Scores lead based on behavior (page visits, email opens)
   - Segments lead (hot/warm/cold)
   - Triggers drip campaign based on segment
5. After 10 days of engagement:
   - Lead score exceeds 50 → Mark as MQL (Marketing Qualified Lead)

- Send to Sales dashboard
- Trigger assignment to sales representative

Business Value:

- 15.4% year-over-year revenue increase
- Reduced email volume while improving quality
- Faster time-to-conversion
- Better sales/marketing alignment

Key Metrics:

- Leads captured: 100+ per month
- Lead quality: 60%+ MQL conversion
- Email open rate: 25%+
- Lead-to-SQL conversion: 15-20%

Use Case 2: Social Media Scheduling and Lead Capture

Description:

Automatically publish landing pages to WordPress, schedule social media posts across platforms, and capture leads from social advertisements.

Actors:

- Marketing Manager
- Social Media Scheduler (automated)
- Platform APIs (Instagram, LinkedIn)
- Lead Capture Engine

Main Flow:

1. Marketing manager creates campaign in DMAT dashboard
2. Selects: landing page, posting channels (Instagram, LinkedIn), schedule time
3. Campaign details:
    - Campaign name: "Spring Sale 2025"
    - Landing page: springcampaign.wordpress.com
    - Channels: Instagram, LinkedIn
    - Schedule: Daily at 9 AM (optimized time)
    - Duration: 7 days
4. System automatically:
    - Publishes landing page to WordPress
    - Generates social media preview (thumbnail, caption)
    - Posts at scheduled time across platforms
    - Tracks clicks, impressions from each platform
5. When user clicks social post:
    - Redirects to landing page
    - Fills form → Lead captured with source attribution
6. Dashboard shows:
    - Platform-wise engagement
    - Cost per lead (CPL) by platform
    - Conversion by source

Business Value:

- 30% increase in conversion rates (consistent messaging)
- Multi-platform reach with single dashboard
- Source attribution clarity
- Optimal posting times increase engagement

Key Metrics:

- Posts published: 50+ per month
- Average engagement rate: 3-5%
- Click-through rate (CTR): 2-4%
- Cost per lead: $5-10
- Leads from social: 200+ per month

Use Case 3: Cart Abandonment and E-Commerce Recovery

Description:

Detect abandoned shopping carts, trigger automated recovery emails and SMS messages with personalized product recommendations.

Actors:

- E-commerce customer
- DMAT system (trigger engine)
- Email/SMS service
- Product database

Main Flow:

1. Customer adds items to cart on e-commerce site
2. Customer leaves without completing checkout
3. System detects abandonment:
    - Captures cart contents (product IDs, quantities)
    - Records abandonment timestamp
    - Stores customer email
4. Trigger: 1 hour after abandonment
    - Sends recovery email with:
        - Products in their cart
        - Discount code: COMEBACK10 (10% off)
        - Urgency message ("Sale ends in 48 hours")
        - Direct link to cart (pre-filled)
5. If not purchased within 24 hours:
    - Sends SMS reminder (only to opted-in customers)
    - Offers 15% discount for SMS recipients
6. If not purchased within 48 hours:
    - Sends final email with increased discount (20% off)
    - Adds to retargeting audience

Business Value:

- 30-40% of abandoned carts recovered

- Average recovery value: $40-60 per cart
- Increased repeat purchases
- Customer re-engagement

Key Metrics:

- Abandonment rate: 70%+ of sites
- Recovery rate: 30-40%
- Average cart value: $50+
- Email CTR: 3-5%
- Revenue recovered: 10-15% additional revenue

Use Case 4: Lead Scoring and Sales Qualification

Description:

Automatically rank leads by purchase intent using behavioral signals, engagement metrics, and company data.

Actors:

- DMAT system (scoring engine)
- Sales team (uses scores for prioritization)

Main Flow:

1. Lead enters system (via landing page, form, import)
2. System collects data:
    - Company size
    - Industry
    - Job title
    - Email domain
    - Website quality score
3. System tracks behaviors:
    - Downloaded whitepaper: +10 points
    - Visited pricing page: +15 points
    - Downloaded case study: +12 points
    - Email open: +5 points
    - Email click: +8 points
    - Form submission: +20 points
    - Visited site 3+ times in week: +10 points
    - Demo request: +50 points
    - Scheduled call: +40 points
4. Real-time scoring:
    - Lead gets 65 points: High priority (hot)
    - Lead gets 40 points: Medium priority (warm)
    - Lead gets less than 25 points: Low priority (cold)
5. Sales team receives alerts:
    - Email notification when lead crosses 50 points threshold
    - Dashboard shows sorted leads by score
    - Assignment logic routes to appropriate sales representative

Business Value:

- 20% reduction in sales cycle length
- 25% increase in sales productivity
- Better lead quality for sales team
- Improved conversion rates

Key Metrics:

- Score accuracy: 80%+
- Average lead score: 35-45 points
- High-priority leads: 15-20% of total
- Sales follow-up time: less than 2 hours for hot leads
- Conversion rate (score 40+): 30%+

Use Case 5: Personalized Email Campaigns

Description:

Create dynamic email content based on user behavior, location, past purchases, and preferences.

Actors:

- Marketing manager (creates campaigns)
- DMAT system (personalizes and sends)
- Customer (receives personalized emails)

Main Flow:

1. Marketing manager creates email campaign: "Product Recommendations"
2. Segmentation rules applied:
   - Segment A: "Tech Industry, Purchased Last 30 Days"
   - Segment B: "Finance Industry, Inactive 90+ Days"
   - Segment C: "Viewed but Never Purchased"
3. Campaign content with dynamic personalization:
   - Subject: Based on customer's first name and industry
   - Content: Product recommendations based on purchase history
   - Discount: Dynamic discount codes per customer
4. System determines optimal send time:
   - Analyzes past engagement for each user
   - Sends when user is most likely to open
   - Varies by timezone
5. A/B testing applied:
   - Subject line A: "we have products for [Industry] professionals"
   - Subject line B: "Exclusive recommendations for [Name]"
   - Winner scales to remaining list
6. Tracking:
   - Open rate per segment
   - Click rate per product
   - Conversion by recommendation
   - Revenue attributed to email

Business Value:

- 25-30% increase in email CTR (personalization)
- 15-20% increase in conversion
- 10-15% improvement in ROI
- Better customer experience

Key Metrics:

- Email sent: 1000+ per day
- Open rate: 25-35%
- Click rate: 3-5%
- Conversion rate: 1-3%
- Revenue per email: $2-5

Use Case 6: Automated Lead Assignment to Sales Team

Description:

Automatically route qualified leads to the right sales representative based on territory, industry, lead score, and availability.

Actors:

- DMAT system (routing engine)
- Sales manager (configures rules)
- Sales representatives (receive leads)

Main Flow:

1. Sales manager configures assignment rules in DMAT:
   - If lead_score > 50: Status = "Ready for Sales"
   - If territory = "California": Assign to "John Smith"
   - If industry = "Technology": Assign to "Tech Specialist"
   - If company_size = "Enterprise": Escalate to Manager
   - Load balancing: Distribute evenly among representatives
2. Lead qualifies as MQL (marketing qualified lead):
   - Score reaches 50+
   - Email engagement confirmed
   - Company data verified
3. System routes lead:
   - Checks territory of company location
   - Matches to sales representative for that territory
   - Verifies representative availability
   - Sends lead to assigned representative immediately
4. Sales representative receives notification:
   - Email alert: "New high-priority lead assigned"
   - Dashboard updates with new lead
   - CRM record created automatically
   - Contextual information provided
5. Lead tracking:
   - Time to first contact (should be less than 1 hour)

- Sales representative response time
- Lead status updates
- Conversion tracking

Business Value:

- 20-30% faster response time to leads
- Reduced lead abandonment
- Better territory coverage
- Increased conversion rates
- Even workload distribution

Key Metrics:

- Average assignment time: less than 2 minutes
- First contact time: less than 1 hour
- Leads assigned per representative per day: 10-15
- Assignment accuracy: 95%+
- Lead follow-up rate: 90%+

Use Case 7: Customer Retention and Loyalty Programs

Description:

Automate personalized offers, birthday campaigns, loyalty rewards, and win-back campaigns to increase customer lifetime value.

Actors:

- DMAT system (automation engine)
- Customers (loyalty members)
- Marketing team (sets up programs)

Main Flow:

1. Loyalty program setup:
    - Tier 1: Silver (0-100 points)
    - Tier 2: Gold (101-500 points)
    - Tier 3: Platinum (500+ points)
2. Automatic triggers:
    - **Purchase Anniversary**: Send personalized offer with 20% discount
    - **Birthday Campaign**: Send birthday offer with gift plus 15% discount
    - **Loyalty Milestone**: Unlock exclusive tier with benefits
    - **Win-Back Campaign**: Three-email sequence over 14 days with increasing discounts
    - **VIP Exclusive Access**: Early sale access for Platinum members
3. Personalized content:
    - Product recommendations based on purchase history
    - Dynamic discount codes per customer
    - Exclusive content for each tier
    - Personalized messaging by segment
4. Tracking and Analytics:
    - Retention rate improvement

- Customer lifetime value (CLV)
- Repeat purchase rate
- Revenue from loyalty program
- Win-back conversion rate

Business Value:

- 25-30% increase in repeat purchase rate
- 15-20% improvement in customer retention
- 10-15% increase in customer lifetime value
- Higher customer satisfaction
- Reduced churn rate

Key Metrics:

- Loyalty member percentage: 40-50% of customer base
- Repeat purchase rate: 60-70% (loyalty members)
- Win-back conversion rate: 15-25%
- Average CLV increase: 20-30%
- Retention rate: 85-90%

Use Case 8: Performance Analytics and Reporting

Description:

Real-time dashboards tracking campaign performance, ROI attribution, funnel optimization, and revenue impact.

Actors:

- Marketing team (views analytics)
- DMAT system (collects and processes data)
- Management (reviews reports)

Main Flow:

1. Data Collection:
   - Campaign clicks and impressions
   - Lead sources and quality
   - Email engagement metrics
   - Conversion events
   - Revenue attribution
   - Customer journey data
2. Dashboard Overview:
   - Total Leads: 2,450
   - MQLs (Marketing Qualified): 610 (24.9%)
   - SQLs (Sales Qualified): 145 (23.8%)
   - Won Deals: 31 (21.4%)
   - Revenue Generated: $124,000
   - Average Deal Value: $4,000
3. Key Metrics Displayed:
   - **Lead Metrics**: Lead volume by source, quality score distribution, lead status
   - **Conversion Metrics**: Conversion funnel analysis, conversion rate by stage

- **Email Metrics**: Open rate, click rate, conversion rate, revenue per email
- **Campaign Metrics**: Budget, spend, ROI, cost per lead
- **Channel Attribution**: Email, social, organic, paid search contribution
- **Sales Pipeline Metrics**: Opportunities, pipeline value, win rate, sales cycle length

4. Advanced Reports:
   - Multi-touch attribution analysis
   - Cohort analysis
   - Funnel analysis
   - Geographic performance
   - Device/browser performance
5. Automated Reporting:
   - Daily digest email to marketing team
   - Weekly executive summary
   - Monthly detailed report
   - Custom reports on demand
6. Real-time Monitoring:
   - Active campaigns dashboard
   - Lead velocity gauge
   - Email delivery status
   - Integration health checks
   - Alert system for anomalies

Business Value:

- Data-driven decision making
- Quick identification of top performers
- ROI visibility for each campaign
- Budget optimization opportunities
- Performance benchmarking

Key Metrics:

- Dashboard accuracy: 99%+
- Report generation time: less than 5 minutes
- Real-time data latency: less than 30 seconds
- User engagement: 80%+ daily active users

Use Case 9: A/B Testing and Optimization

Description:

Automatically test different variations of landing pages, email subject lines, send times, and creative elements to optimize performance.

Actors:

- Marketing manager (creates tests)
- DMAT system (executes tests)
- Statistical analysis engine

Main Flow:

1. Setup A/B Test - Email Subject Line:
   - Campaign: "Spring Sale Newsletter"
   - Test Type: Subject Line
   - Variant A: "Limited time offer: Save 20%"
   - Variant B: "Exclusive deal for you - Today only"
   - Split: 50/50
   - Sample size: 1,000 recipients per variant
   - Test duration: 24 hours
   - Success metric: Open rate
2. Test Execution:
   - Randomly split audience (50% each)
   - Variant A sent to 500 people
   - Variant B sent to 500 people
   - Track opens for each variant
   - Record results in real-time
3. Live Test Results (after 24 hours):
   - Variant A (Limited time offer: Save 20%): 31.2% open rate
   - Variant B (Exclusive deal for you - Today only): 28.4% open rate
   - Winner: Variant A
   - Confidence level: 85%
4. Apply Winning Variant:
   - Scale Variant A to remaining email list
   - Send to remaining 8,000 recipients
   - Estimated improvement in opens: 31.2% vs control
5. A/B Testing Scenarios:
   - Landing Page CTA Button: "Get Started" vs "Start Free Trial"
   - Email Send Time: 9 AM vs 6 PM
   - Landing Page Layout: Form left vs form right
   - Discount Offer: "$20 off" vs "20% off"
   - Email Frequency: 1 email/week vs 2 emails/week

Business Value:

- 10-25% performance improvement per test
- Data-driven optimization culture
- Reduced wasted spend on poor performers
- Continuous improvement mindset
- Higher conversion rates over time

Key Metrics:

- Tests run per month: 10-15
- Average improvement per test: 12-15%
- Confidence level: 85%+ for decisions
- Implementation rate: 90%+

Use Case 10: Multi-Channel Campaign Execution

Description:

Coordinate messaging across email, SMS, push notifications, web, and in-app channels to create unified, omnichannel campaigns.

Actors:

- Marketing manager (creates campaign)
- DMAT system (orchestrates execution)
- Customers (receive messages across channels)

Main Flow:

1. Campaign Planning - "Spring Sale 2025":
   - Objective: Drive 1,000 sales within 7 days
   - Budget: $10,000
   - Target audience: Existing customers plus newsletter subscribers
   - Expected ROI: 3x ($30,000 revenue)
2. Campaign Strategy by Channel:
   - **Email**: Day 1 announcement to 15,000 subscribers
   - **SMS**: Day 2 reminder to 5,000 opted-in users
   - **Push Notifications**: Day 3 to 8,000 app users
   - **Web Banner**: Day 1-7 persistent homepage banner
   - **Social Media**: Day 4 Instagram and Day 5 LinkedIn
   - **In-App Message**: Day 5 full-screen interstitial
   - **Retargeting Ads**: Day 1-7 to abandoned cart users
3. Campaign Timeline:
   - Day 1: Email announcement plus web banner
   - Day 2: SMS reminder plus retargeting ads start
   - Day 3: Push notification
   - Day 4: Instagram post
   - Day 5: LinkedIn article plus in-app message
   - Day 6: Email reminder (mid-week boost)
   - Day 7: Final email plus SMS reminder
4. Cross-Channel Analytics:
   - Email: 15,000 sent, 4% CTR, 200 conversions, $8,000 revenue, 80x ROI
   - SMS: 5,000 sent, 20% CTR, 150 conversions, $6,000 revenue, 12x ROI
   - Push: 8,000 sent, 8% CTR, 90 conversions, $3,600 revenue
   - Web Banner: 100,000 sent, 1.5% CTR, 120 conversions, $4,800 revenue
   - Social: 20,000 sent, 3% CTR, 100 conversions, $4,000 revenue, 2x ROI
   - In-app: 8,000 sent, 12% CTR, 110 conversions, $4,400 revenue
   - Retargeting: 2% conversion, 60 conversions, $2,400 revenue, $3,000 cost, 0.8x ROI
   - **Total**: 830 conversions, $33,200 revenue, $5,600 cost, 5.9x ROI
5. Attribution and Insights:
   - Multi-touch attribution shows which channels worked together
   - Email was first touchpoint: 35% of conversions
   - SMS was last touchpoint: 25% of conversions
   - Cross-channel frequency: 45% conversion rate for 3+ channels vs 18% single channel

Business Value:

- 5-6x ROI from coordinated campaigns
- 40-50% increase in conversions vs single-channel
- Better customer experience (consistent messaging)
- Channel synergy effects
- Improved brand recall

Key Metrics:

- Total conversions: 800-1000 per campaign
- Average customer touchpoints: 3-4 channels
- Multi-channel conversion uplift: 40-50%
- Campaign ROI: 5-6x
- Customer satisfaction: 85%+

Feature Implementation Roadmap

The following priority matrix guides the implementation sequence, balancing effort with business impact:

Priority	Feature	Effort	Impact	Phase
P0	Lead capture forms	Low	Critical	Phase 1
P0	Lead scoring engine	Medium	Critical	Phase 2
P0	Segmentation/filtering	Medium	Critical	Phase 1
P0	Basic workflow automation	Medium	Critical	Phase 1
P1	Email automation	High	High	Phase 2
P1	WordPress integration	High	High	Phase 1
P1	Analytics dashboard	High	High	Phase 3
P1	Social scheduling	High	High	Phase 2
P1	CRM integration	High	High	Phase 2
P2	SMS automation	High	Medium	Phase 3
P2	Multi-channel orchestration	High	Medium	Phase 4
P2	A/B testing framework	High	Medium	Phase 3
P3	AI-powered insights	Very High	Medium	Phase 5
P3	Predictive lead scoring	Very High	Medium	Phase 5

Table 2: Feature Priority Matrix

Technical Architecture

System Components

The DMAT system follows a layered architecture with clear separation of concerns:

Client Layer: React and Vite provide a modern, responsive user interface for campaign management, lead tracking, and analytics.

API Gateway: Express.js handles authentication, routing, and request validation.

Business Logic Layer: Modular engines for lead management, automation, campaign management, and analytics.

Data Access Layer: ORM (Sequelize/TypeORM) provides abstraction over database operations.

Database Layer: SQL Server or MySQL stores relational data with optimized indexes.

External Integrations: WordPress, email services, SMS providers, CRM systems, and analytics platforms.

Technology Stack Details

Frontend Stack:

- Framework: React 18+
- Build Tool: Vite
- State Management: Redux or Zustand
- UI Library: Material-UI or Tailwind CSS
- Charts: Recharts or Chart.js
- Form Library: React Hook Form
- HTTP Client: Axios

Backend Stack:

- Runtime: Node.js 18+
- Framework: Express.js
- Language: JavaScript/TypeScript
- Authentication: JWT plus OAuth
- Caching: Redis
- Job Queue: Bull or Bee-Queue
- File Upload: Multer or Cloudinary

Database Stack:

- Primary: SQL Server or MySQL 8.0+
- Replication: Master-slave setup for scaling
- Query Optimization: Indexing on frequently queried columns
- Backup: Daily automated backups

DevOps Stack:

- Version Control: GitHub

- CI/CD: GitHub Actions
- Containerization: Docker
- Orchestration: Docker Compose (or Kubernetes for scale)
- Monitoring: Prometheus plus Grafana
- Logging: ELK Stack (Elasticsearch, Logstash, Kibana)

Database Schema

The following tables comprise the core data model for DMAT:

Users Table

Stores user account information and role assignments:

```
CREATE TABLE users (
id INT PRIMARY KEY AUTO_INCREMENT,
name VARCHAR(255) NOT NULL,
email VARCHAR(255) UNIQUE NOT NULL,
password_hash VARCHAR(255) NOT NULL,
role ENUM('admin', 'marketer', 'sales') DEFAULT 'marketer',
company_id INT,
status ENUM('active', 'inactive', 'suspended') DEFAULT 'active',
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,
FOREIGN KEY (company_id) REFERENCES companies(id)
);
```

Leads Table

Core table for prospect and customer information:

```
CREATE TABLE leads (
id INT PRIMARY KEY AUTO_INCREMENT,
email VARCHAR(255) NOT NULL,
name VARCHAR(255),
phone VARCHAR(20),
company_name VARCHAR(255),
company_size ENUM('1-10', '11-50', '51-200', '201-1000', '1000+'),
industry VARCHAR(100),
job_title VARCHAR(100),
lead_score INT DEFAULT 0,
status ENUM('new', 'contacted', 'qualified', 'lost', 'won') DEFAULT 'new',
source ENUM('landing_page', 'social', 'email', 'webinar', 'referral', 'import') DEFAULT
'landing_page',
landing_page_id INT,
campaign_id INT,
assigned_to INT,
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,
```

```
FOREIGN KEY (landing_page_id) REFERENCES landing_pages(id),
FOREIGN KEY (campaign_id) REFERENCES campaigns(id),
FOREIGN KEY (assigned_to) REFERENCES sales_reps(id),
INDEX idx_email (email),
INDEX idx_lead_score (lead_score),
INDEX idx_status (status)
);
```

Landing Pages Table

Stores landing page configurations and metadata:

```
CREATE TABLE landing_pages (
id INT PRIMARY KEY AUTO_INCREMENT,
title VARCHAR(255) NOT NULL,
slug VARCHAR(255) UNIQUE NOT NULL,
description TEXT,
content_json JSON,
template_type ENUM('standard', 'product', 'webinar', 'download') DEFAULT 'standard',
status ENUM('draft', 'published', 'archived') DEFAULT 'draft',
creator_id INT NOT NULL,
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,
published_at TIMESTAMP NULL,
FOREIGN KEY (creator_id) REFERENCES users(id),
INDEX idx_slug (slug),
INDEX idx_status (status)
);
```

Campaigns Table

Stores campaign information with budget and status:

```
CREATE TABLE campaigns (
id INT PRIMARY KEY AUTO_INCREMENT,
name VARCHAR(255) NOT NULL,
description TEXT,
status ENUM('draft', 'active', 'paused', 'completed', 'archived') DEFAULT 'draft',
start_date DATETIME,
end_date DATETIME,
budget DECIMAL(10, 2),
actual_spend DECIMAL(10, 2) DEFAULT 0,
objective VARCHAR(255),
creator_id INT NOT NULL,
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,
FOREIGN KEY (creator_id) REFERENCES users(id),
INDEX idx_status (status),
INDEX idx_dates (start_date, end_date)
);
```

Email Campaigns Table

Manages email campaign details and engagement tracking:

```
CREATE TABLE email_campaigns (
id INT PRIMARY KEY AUTO_INCREMENT,
campaign_id INT NOT NULL,
subject_line VARCHAR(255) NOT NULL,
from_name VARCHAR(255),
from_email VARCHAR(255),
content_html TEXT,
status ENUM('draft', 'scheduled', 'sent', 'sending') DEFAULT 'draft',
scheduled_at DATETIME,
sent_at DATETIME,
total_sent INT DEFAULT 0,
total_opened INT DEFAULT 0,
total_clicked INT DEFAULT 0,
total_converted INT DEFAULT 0,
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
FOREIGN KEY (campaign_id) REFERENCES campaigns(id),
INDEX idx_status (status),
INDEX idx_scheduled_at (scheduled_at)
);
```

Email Interactions Table

Tracks individual email events (opens, clicks, bounces):

```
CREATE TABLE email_interactions (
id INT PRIMARY KEY AUTO_INCREMENT,
email_campaign_id INT NOT NULL,
lead_id INT NOT NULL,
interaction_type ENUM('sent', 'open', 'click', 'bounce', 'unsubscribe', 'complaint') DEFAULT 'sent',
link_clicked VARCHAR(255) NULL,
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
FOREIGN KEY (email_campaign_id) REFERENCES email_campaigns(id),
FOREIGN KEY (lead_id) REFERENCES leads(id),
INDEX idx_email_campaign_id (email_campaign_id),
INDEX idx_lead_id (lead_id),
INDEX idx_interaction_type (interaction_type),
INDEX idx_created_at (created_at)
);
```

Workflow Automations Table

Stores automation rules and trigger configurations:

```
CREATE TABLE workflow_automations (
id INT PRIMARY KEY AUTO_INCREMENT,
name VARCHAR(255) NOT NULL,
trigger_type ENUM('form_submit', 'email_open', 'link_click', 'cart_abandon', 'tag_added',
```

```
'date_trigger') NOT NULL,
trigger_condition JSON,
action_type ENUM('send_email', 'send_sms', 'assign_lead', 'update_score', 'create_task') NOT
NULL,
action_data JSON,
status ENUM('active', 'paused', 'archived') DEFAULT 'active',
creator_id INT NOT NULL,
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,
FOREIGN KEY (creator_id) REFERENCES users(id),
INDEX idx_status (status)
);
```

Analytics Events Table

Captures all user interactions for analysis:

```
CREATE TABLE analytics_events (
id INT PRIMARY KEY AUTO_INCREMENT,
lead_id INT,
event_type VARCHAR(50),
event_data JSON,
source VARCHAR(100),
session_id VARCHAR(255),
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
FOREIGN KEY (lead_id) REFERENCES leads(id),
INDEX idx_lead_id (lead_id),
INDEX idx_event_type (event_type),
INDEX idx_created_at (created_at)
);
```

API Specifications

Lead Management APIs

Create Lead

Endpoint: POST /api/leads

This endpoint captures a new lead into the system.

Request body includes: email, name, phone, company_name, company_size, industry,
job_title, source, landing_page_id, campaign_id

Response (201 Created): Lead object with assigned ID, initial lead_score of 0, status "new",
and creation timestamp

Get Lead

Endpoint: GET /api/leads/{leadId}

Retrieves detailed information for a specific lead including engagement history and interaction log.

Update Lead Score

Endpoint: POST /api/leads/{leadId}/score

Updates lead score based on activity (email_open, link_click, form_submit, page_visit, demo_request)

Campaign Management APIs

Create Campaign

Endpoint: POST /api/campaigns

Creates a new marketing campaign with name, description, dates, budget, and objective.

Get Campaign Performance

Endpoint: GET /api/campaigns/{campaignId}/analytics

Returns comprehensive campaign metrics including total leads, MQLs, conversions, revenue, and ROI by channel.

Email Automation APIs

Send Email Campaign

Endpoint: POST /api/email-campaigns/{campaignId}/send

Sends an email campaign to specified segment with subject, content, and optional scheduling.

Get Email Analytics

Endpoint: GET /api/email-campaigns/{emailCampaignId}/analytics

Returns email engagement metrics: sent count, open rate, click rate, conversion rate, bounce rate, unsubscribe count.

Workflow Automation APIs

Create Workflow

Endpoint: POST /api/workflows

Creates an automation workflow with trigger type, conditions, action type, and action data.

Get Workflow Execution History

Endpoint: GET /api/workflows/{workflowId}/executions

Returns execution log including total executions, success rate, and recent execution details.

Integration Requirements

WordPress Integration

Purpose: Create and publish landing pages

Implementation approach:

- Install WordPress plugin or use REST API
- Store landing page URL for tracking
- Implement tracking pixel for analytics
- Form submission webhook to DMAT

Email Service Integration (SendGrid/Brevo)

Purpose: Send automated emails and track engagement

Requirements:

- Send email API
- Track opens and clicks
- Manage bounce and unsubscribe lists
- Webhook events for email interactions

SMS Service Integration (Twilio)

Purpose: Send SMS campaigns and reminders

Requirements:

- Send SMS API
- Get SMS delivery status
- Track SMS responses

CRM Integration (HubSpot/Salesforce)

Purpose: Sync leads and manage sales pipeline

Endpoints:

- Create/update contact
- Create deal
- Get contact properties
- Sync activity log

Social Media APIs

Instagram/Facebook:

- Publish posts
- Get insights
- Track link clicks

LinkedIn:

- Publish articles
- Get engagement metrics

Analytics Integration

Google Analytics:

- Track pageviews
- Track conversions
- Get audience segments

Phase-wise Development Plan

Phase 0: Deciding Tech Stack (Completed)

Status: ✅ Complete

- Frontend: React plus Vite
- Backend: Node.js plus Express
- Database: SQL Server or MySQL
- Repository: GitHub

Outcome: Technology foundation established and validated

Phase 1: First Complete Story - Landing Page, WordPress Integration, Lead Capture

Duration: 4-6 weeks

Deliverables:

1. WordPress integration system
   - Create landing pages in WordPress
   - Publish to custom domain
   - Sync page analytics
2. Form capture system
   - Build responsive forms on landing pages
   - Capture leads to database
   - Field validation and error handling
3. Lead management dashboard
   - Display captured leads in table format
   - Filter and search functionality
   - Lead details view with interaction history
4. Basic tracking system
   - Capture source attribution
   - Track page visits
   - Record form submission events

Success Criteria:

- 100+ leads captured successfully
- 90%+ form submission success rate

- Dashboard loads in less than 2 seconds
- Lead data visible and searchable in CRM

Phase 2: Scheduler Implementation and Lead Scoring

Duration: 4-6 weeks

Deliverables:

1. Email sequence builder
   - Create drip campaigns
   - Schedule emails
   - Template management
2. Social media scheduler
   - Schedule posts to platforms
   - Track engagements
   - Performance analytics
3. Workflow automation
   - Trigger-based actions
   - Simple rules engine
   - Execution logging
4. Lead scoring engine
   - Behavioral scoring system
   - Score thresholds and tiers
   - Real-time score updates

Success Criteria:

- 500+ email sequences created
- 1000+ posts scheduled monthly
- 80%+ workflow execution rate
- Lead scores accurate 85%+

Phase 3: Analytics, Dashboard, and A/B Testing

Duration: 4-6 weeks

Deliverables:

1. Comprehensive analytics dashboard
   - Campaign performance metrics
   - Lead metrics and funnel analysis
   - Revenue attribution
2. Real-time reporting
   - Live metrics updates
   - Automated report generation
   - Custom report builder
3. A/B testing framework
   - Test builder interface
   - Statistical significance calculation
   - Automated winner selection

Success Criteria:

- Dashboard loads in less than 3 seconds
- 99.9% data accuracy
- Reports generated in less than 5 minutes
- A/B tests run monthly with confidence

Phase 4: Reporting, Advanced Features, and Compliance

Duration: 4-6 weeks

Deliverables:

1. Advanced reporting
   - Custom report builder
   - Multi-channel attribution
   - ROI calculations and visualizations
2. Multi-channel support
   - SMS automation
   - Push notifications
   - In-app messaging
3. Compliance features
   - GDPR compliance controls
   - Data privacy settings
   - Audit logging

Success Criteria:

- 50+ report templates available
- 95%+ attribution accuracy
- Multi-channel campaign execution working
- 100% compliance audit pass

Phase 5: Exception Handling, Performance, and Security

Duration: 4-6 weeks

Deliverables:

1. Error handling infrastructure
   - Graceful degradation on failures
   - Comprehensive error logging
   - Automatic recovery mechanisms
2. Performance optimization
   - Database query optimization
   - Caching strategies (Redis)
   - API response times under 200ms
3. Security hardening
   - SSL/TLS encryption
   - Data encryption at rest and in transit
   - API rate limiting and DDoS protection

Success Criteria:

- 99.99% uptime achieved

- Error rate below 0.1%
- API response time below 200ms (95th percentile)
- Security audit pass with no critical findings

Success Metrics and KPIs

Business Metrics

Metric	Target	Formula
Revenue Generated	$100K+	Campaign revenue minus spend
Return on Investment (ROI)	4-6x	(Revenue / Spend) times 100
Lead Volume	1000+ per month	Total leads captured
Lead Quality	60%+ MQL	MQLs divided by Total leads
Sales Cycle	30-45 days	Deal close date minus first touch
Customer Acquisition Cost	$50-100	Marketing spend divided by new customers
Customer Lifetime Value	$500-1000	Total revenue from customer

Table 3: Business Metrics and Targets

Operational Metrics

Metric	Target	Formula
Campaign Success Rate	75%+	Successful campaigns divided by total
Email Open Rate	25-30%	Opens divided by sends times 100
Email Click Rate	3-5%	Clicks divided by opens times 100
Conversion Rate	2-4%	Conversions divided by total visits times 100
System Uptime	99.9%	Available time divided by total time times 100
API Response Time	Less than 200ms	Total response time divided by requests
Database Query Time	Less than 100ms	Query execution time

Table 4: Operational Metrics and Targets

User Adoption Metrics

- Active Users: 500+
- Daily Active Users: 300+
- Campaign Creation per Month: 50+
- Workflow Creation per Month: 30+
- Feature Usage: 70%+ of available features
- User Satisfaction (Net Promoter Score): 50+

Technical Metrics

- Error Rate: Less than 0.1%
- Database Performance: Less than 100ms for queries
- Code Coverage: 80%+
- Security Compliance: 100% (GDPR, CCPA)
- Mobile Responsiveness: 100% feature parity
- Browser Compatibility: Chrome, Safari, Firefox, Edge

Conclusion

The DMAT (Digital Marketing Automation Tool) platform represents a significant opportunity to capture value in the rapidly growing marketing automation market. By implementing the 10 core use cases outlined in this document and following the phased development approach, the platform can deliver measurable ROI to customers across industries.

The technical architecture is sound, scalable, and built on proven technologies. The comprehensive database schema supports complex business logic without requiring major redesigns. The phased approach balances speed-to-market with feature completeness.

Key Recommendations

1. **Prioritize Phase 1 Completion**: Focus on WordPress integration and lead capture as the foundation for all subsequent features.
2. **Invest in Data Infrastructure**: Build robust analytics and tracking from day one, as this becomes increasingly important for customer success.
3. **Build for Integration**: Design all components with integration in mind, as third-party connections create significant customer value.
4. **Focus on User Experience**: The dashboard and lead management interface are critical differentiators in the market.
5. **Plan for Scale**: Implement caching, database optimization, and load balancing strategies early to support rapid growth.

Next Steps

1. Finalize requirements and user stories for Phase 1
2. Begin WordPress integration development
3. Set up GitHub repository structure and CI/CD pipeline
4. Create detailed database schema and API contract documentation
5. Establish development sprints and team allocation

6. Set up monitoring and analytics infrastructure

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