SEO Tool Suite - Google Ads API Integration Design Document

1. Overview

Application Name: SEO Tool Suite **Company:** SEO Art Digital Marketing Agency **Purpose:** Internal keyword research and campaign optimization tool

2. Application Description

SEO Tool Suite is an internal marketing tool designed to help our team: - Research keywords for client advertising campaigns - Analyze search volumes and competition levels - Plan content marketing and PPC strategies - Generate keyword ideas for ad groups

This tool is for **internal business use only** and will not be distributed to third parties.

3. Google Ads API Usage

3.1 Endpoints Used

We will use the following Google Ads API endpoints:

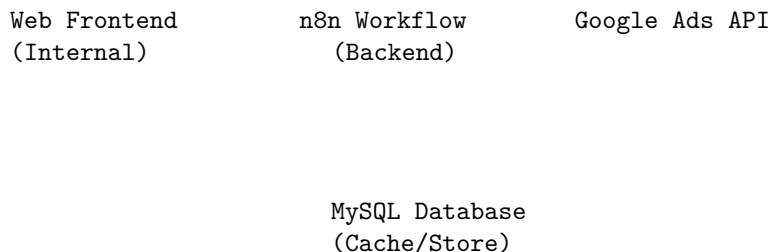| Endpoint	Purpose
`KeywordPlanIdeaService.GenerateKeywordIdeas`	Generate keyword suggestions based on seed keywords
`KeywordPlanService`	Create and manage keyword plans

3.2 Data Retrieved

- Keyword suggestions
- Average monthly search volume
- Competition level (LOW, MEDIUM, HIGH)
- Average CPC (Cost Per Click)

3.3 Rate Limits

We will respect Google Ads API rate limits and implement: - Request throttling - Caching of results (60-day cache) - Exponential backoff on errors

4. Architecture

```
Web Frontend        n8n Workflow       Google Ads API
(Internal)           (Backend)




                    MySQL Database
                    (Cache/Store)
```

5. Authentication

- OAuth 2.0 authentication with refresh tokens
- Credentials stored securely in environment variables
- Access tokens refreshed automatically before expiration

6. Data Security

- All API credentials stored in encrypted environment variables
- No sensitive data exposed in logs
- Database access restricted to internal network
- HTTPS for all communications

7. User Access

- Tool is accessible only to internal team members
- No public access or third-party distribution
- Authentication required for all users

8. Use Cases

Use Case 1: Keyword Research

1. User enters a seed keyword (e.g., "digital marketing")
2. System calls Google Ads API to get keyword ideas
3. Results displayed with search volume and competition
4. User selects relevant keywords for campaigns

Use Case 2: Campaign Planning

1. User creates a new campaign project
2. System generates keyword suggestions
3. Keywords grouped by intent and topic
4. Export to Google Ads or internal reports

9. Compliance

- We comply with Google Ads API Terms of Service
- No automated bidding or campaign creation without user consent
- Data used only for internal business purposes
- User data protected according to GDPR/KVKK regulations

10. Contact Information

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