<u>Project timeline for SpaceOdyssey - Automated radius</u> <u>updates</u>

Dear SpaceOdyssey team,

Thank you for entrusting the Automated Radius Updates project to the Essencemediacom team. We have summarized the development timelines, broken down into key phases of the project. This is to help set expectations and ensure a smooth process and communication throughout the development. Please note that these are estimates. We want to ensure that the implementation of the project is developed efficiently and smoothly on time. We will conduct thorough testing throughout the development, including end-to-end tests before the deployment into production, resulting in a working and secure solution. At the end of this project, the radius updates will be fully automated, including budget adjustment when 'boosting' the ad campaign. This will be achieved by processing the CSV file sent by your team each week.

Phase 1: Setting up Google Apps Script for Email monitoring

Outcome: Script that will automatically check the Gmail account for incoming emails with a specific subject and CSV attachment and forwards the data to another service

Estimated time: 3 days

Day 1: Set up a new Gmail account to receive the email with CSV file weekly, Start writing the Google Apps Script.

Day 2: Continue writing the script and setting up triggers which will cause the script to run automatically based on a day of the week.

Day 3: Finalising writing of the script, debugging and testing to make sure it correctly identifies and processes the emails.

Phase 2: Amazon Web Services (AWS) implementation

This phase includes setting up various AWS services to process the CSV file, interact with Google Ads API and Facebook Ads API, and store results for visualisation.

2.1. Create an S3 Bucket

Outcome: An S3 bucket where all the sales data will be stored with appropriate permissions.

Estimated time: 0.5 day

Day 1: Creating the S3 bucket and configuring permissions to ensure it is not publicly accessible and secure.

2.2. Develop the Lambda function

Outcome: A Lambda function that processes the CSV data, interacts with Google and

Facebook Ads APIs, and stores sales data in S3.

Estimated time: 5 days

Day 1: Create Lambda function and configure and set up <u>basic</u> environment such as IAM roles and permissions needed for the Lambda function.

Day 2 - 3: Write the function code with logic for processing the CSV data, and Google and Facebook Ads APIs interaction.

Day 4: Finalise implementation of interaction with Google and Facebook Ads APIs.

Day 5: Testing and Debugging to ensure all functionalities work as expected.

2.3 Set up API Gateway

Outcome: An API Gateway endpoint to expose the lambda function as a REST API

Estimated time: 2 days

Day 1: Create and configure API Gateway. Integrate API Gateway with our Lambda function.

Day 2: Deploy and test the API Gateway to confirm it triggers the Lambda function.

2.4 Review of IAM Roles and Policies (Security)

Outcome: Secure IAM roles and policies for the lambda funtion, S3, API Gateway, Amazon QuickSight.

Estimated time: 1 day

Day 1: Create and attach least-privilage policy for Lambda, S3 bucket permissions, API Gateway, QuickSight.

Phase 3: Data visualisation using Amazon QuickSilver

Outcome: A dashboard that visualises the sales data stored in S3 bucket.

Estimated time: 2 days

Day 1: Set up Amazon QuickSight and connect it with the S3 bucket where we store sales data. Set up permissions for QuickSight to access the S3.

Day 2: Create datasets, build visualisations. Test the dashboard to ensure it meets the project requirements

Phase 4: Final refinement, integration and testing

Outcome: A fully functional and tested automation that processes CSV file sent via email, updates ad campaigns based on the data in the CSV file, and visualises sales data.

Estimated time: 2 days

Day 1: Refinement and integration of all components of the solution

Day 2-3: End-to-end testing and final adjustments to ensure the automation solution is ready for deployment

Phase 5: Deployment

Outcome: A fully deployed radius automation solution ready for use.

Estimated time: 1 day

Day 1: Deployment of the solution

Phase 6: Maintenance and monitoring

Outcome: Monitoring and maintaining the solution to make sure the radius automation is securely running without any rare occurrences of errors. This is a continuous service without a timeline based on notifications from a monitoring tool.

Project summary

Phase 1: 3 days Phase 2: 8.5 days Phase 3: 2 days Phase 4: 3 days Phase 5: 1 day

Total estimated time: 17.5 days

We are committed to deliver a robust and efficient solution whilst keeping you well informed throughout the progression of the project. Please allow a buffer time to account for unexpected issues and additional testing as well as additional time for the solution reviews by your team.

Best Regards,

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