Customer Relationship Management Project Proposal

[redacted]

The American Video Game Company

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Version 1.0

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A. INTRODUCTION

Our company Mika Systems are proposing an adaptive Customer Relationship Management System (CRM) solution to fulfill the requirements set forth by American Video Gaming Company (AVGC). Our proposed system will be designed to help AVGC make constructive decisions, manage operations, and further business growth.

A.1. PURPOSE STATEMENT

The purpose of this document is to define the requirements for our proposed system and present why it will be the best solution to address AVGC's business goals relevant to their current and future operations.

A.2. OVERVIEW OF THE PROBLEM

AVGC is experiencing 42% sales growth and seeks a CRM system that can accommodate their current demands and future endeavors. Their current automated and manual tools are disjointed across various departments. Their outdated IT ecosystem leaves room for security breaches and possible disruption to their business services. They lack the necessary resources to fulfill their business needs and if these issues are not addressed, it can disrupt their business, damage reputation, and cause loss of customers.

A.3. GOALS AND OBJECTIVES

Our goal is to provide the client, AVGC, with a CRM system that will integrate with their current and future system operations to allow efficient management in their critical business process flows.

To meet these goals, we, Mika Systems, will create an adaptable CRM system to allow AVGC to:

- Effectively use and manage opportunities
- Accommodate the current and growing user base
- Access and maintain data reporting
- Easily transition internal components to a hybrid cloud solution
- Access and operate on various operating systems and browsers

A.4. PREREQUISITES

Below is a collection of prerequisites needed prior to the design, development, and implementation of the proposed system.

#	Prerequisite	Description	Duration
001	Data Collection	Identify what data will be moved from existing system to the proposed system. Perform data mapping between both systems.	3 weeks from start date
002	Documentation Gathering	Proper documentation management should be collected and centralized in one setting throughout the life of the project	2 weeks from start date
003	Data Backup	A full data backup of existing system should be conducted to ensure successful rollback and recovery is readily available	1 week from start date

A.5. SCOPE

Our proposed system will address the necessary steps to transition AVGC's current operations to the new adaptable system. It will provide the tools needed to simplify and enhance sales processes and workflow, effectively manage reporting functionalities, perform on the latest operating systems and browsers, accommodate the user base, and transition specific components to a hybrid cloud solution.

At this time, the proposed system will not accommodate anything outside of the scope mentioned above. These include but not limited to fixing any current systems or processes.

A.6. ENVIRONMENT

The proposed system's environment will be compatible with the following:

- SQL Server 2019 (current server)
- Hybrid Cloud (subscription-based)
- Windows 10/11 and macOS 13
- Chrome v.108.0.5359.98, Firefox v.107.0.1, Internet Explorer v.11, latest Chromium for Windows
- Safari v.16.1, Chrome v.108.0.5359.98 for macOS
- Safari v.16.1, Chrome v.108.0.5359.52, Firefox v.107.3 for iOS 16.1.2 and iPadOS 16.1.1
- Chrome v.108.0.5359.79, Firefox v.107.0 for Android 13

B. REQUIREMENTS

In this section, the proposed system has created solutions for AVGC's business, user, functional and nonfunctional requirements.

B.1. BUSINESS REQUIREMENTS

➢ **Hosting**

As AVGC continues to grow, its infrastructure can become costly to meet the current demands and future endeavors. Mika Systems proposes a hybrid-cloud hosting solution to unify the platform to work on all environments, provide a more secure IT ecosystem, and adapt to change without costly rebuilding. AVGC can still utilize its internal infrastructure by storing sensitive data in the SQL database and transition application development and portable workflows to the public cloud. Off-server periodic backups can be accessed easily via the dashboard to schedule data backups. To promote seamless business flow, maintenance will be conducted every month without interruption. Support will be available 24/7 to help ensure AVGC's business needs are addressed and fulfilled. AVGC will be provided flexible upgrade options and may refuse to upgrade at any time with ease.

➢ **OS and Browser Support**

The proposed system will be compatible with modern devices using various operating systems and browsers. Our CRM will accomplish this by supporting the latest operating system standards and browser-based clients compatible with almost any device. The latest standards also strengthen security and promote seamless accessibility and backward flexibility. Performance is increased and is operable without limitations from the latest browsers.

B.2. USER REQUIREMENTS

➢ **Opportunity Management**

Sales processes are integral to business workflow, such as tracking pipelines, team onboarding, and performing various analyses. The proposed system will provide the capabilities to manage sales processes. The opportunity management in our CRM will act as a hub to automate sales processes and workflow, providing features to easily track and manage every step of the sales cycle from lead to conversion. Some of the many features that can be utilized include:

- Measuring analysis by channel
- Forecasting sales
- Customizing dashboards and sales cycles

B.3. FUNCTIONAL REQUIREMENTS

➢ **Reporting**

The proposed system will allow users to manipulate data into helpful information using predefined and custom reporting tools. AVGC uses various tools across multiple departments, with many team members working remotely. Our CRM aims to enable data analytics through email trends using conventions and keywords, centralizing document management systems, and more. Some of the many ways this will be accomplished include:

- Storing historical data in a central repository
- Creating custom dashboards
- Filtering department-related data
- Importing and exporting data accordingly

B.4. NONFUNCTIONAL REQUIREMENTS

➢ **Users**

The proposed system will accommodate system access of 2,000 users with the capacity to handle 500 concurrent logins without degrading the user experience. Our recommended hybrid-cloud solution will accommodate service capacity by focusing on a load-balance cluster of virtual servers to drive high and low traffic, strengthen security, and supply efficient performance capabilities.

C. SOFTWARE DEVELOPMENT METHODOLOGY

We will begin by comparing the advantages and disadvantages of the traditional Waterfall methodology AVGC has chosen and another method approach for this project.

The traditional Waterfall methodology focuses on delivering the full product by following a sequential process completing one phase entirely before cascading down into the next phase.

Waterfall Development Cycle

1. Requirement Analysis: Captures requirements and deliverables
2. System Design: Create design based on requirements
3. Implementation: Build with code and perform unit testing for code
4. Testing: Identify bugs and defects
5. Deployment: Deploy final product
6. Maintenance: Make changes based on user feedback

The other methodology approach to be discussed is Agile. It can be described as flexible and adaptable. It focuses on smaller bits until it produces the bigger picture by repeating the process until the product is complete.

Agile Development Cycle

1. Requirements: Define and prioritize requirements
2. Development: Design and develop software based on requirements
3. Testing: Perform testing and document results
4. Delivery: Integrate and deliver working product
5. Feedback: Solicit feedback and incorporate into the next iteration

C.1. ADVANTAGES OF THE WATERFALL METHOD

Some advantages of using the traditional Waterfall method include:

- Affordability compared to other models
- Decent development time when project has a clear vision
- Embraces deadlines with clear estimated costs and plan

C.2. DISADVANTAGES OF THE WATERFALL METHOD

Some disadvantages of the traditional Waterfall method include:

- Longer delivery times of final product due to its linear approach
- Challenges and risks are not identified until testing is done at a later stage
- Difficulty to accommodate changes throughout project cycle

C.3. ADVANTAGES OF THE AGILE METHOD

Some advantages of the Agile method include:

- Ongoing collaboration enabling everyone to take part in the process

- Quicker development time as different phases are worked on simultaneously
- Iteration testing with user feedback

C.4. DISADVANTAGES OF THE AGILE METHOD

Some disadvantages of the Agile method include:

- Lack of documentation throughout the life of project
- No clear vision of final product thus is unpredictable
- Difficulty to adopt Agile management system

C.5. BEST SUITED

The proposed system will be adaptable, and the Agile-Waterfall Hybrid method is best suited to meet AVGC's project goals. The Waterfall approach will help keep the project vision clear and will handle the upfront planning, requirements gathering and analysis, documentation, and budget. When solid details are provided, our team will switch to the agile approach to handle the design, development, and testing. Agile's testing methods will ensure that all proposed requirement solutions are functioning properly; users can access the latest operating systems and browsers, reporting tools are fully functional, and limited user feedback will ensure successful integration. Overall, both methodologies combined are better equipped at providing flexibility and low risk management needed to make the project successful.

D. DESIGN

Figure 1 provides a visual of how user(s) can navigate through the proposed system. All components are connected in some way and can be easily accessed through the dashboard. Figure 2 provides a visual of how navigation will appear on the dashboard.

D1. CRM FLOWCHART

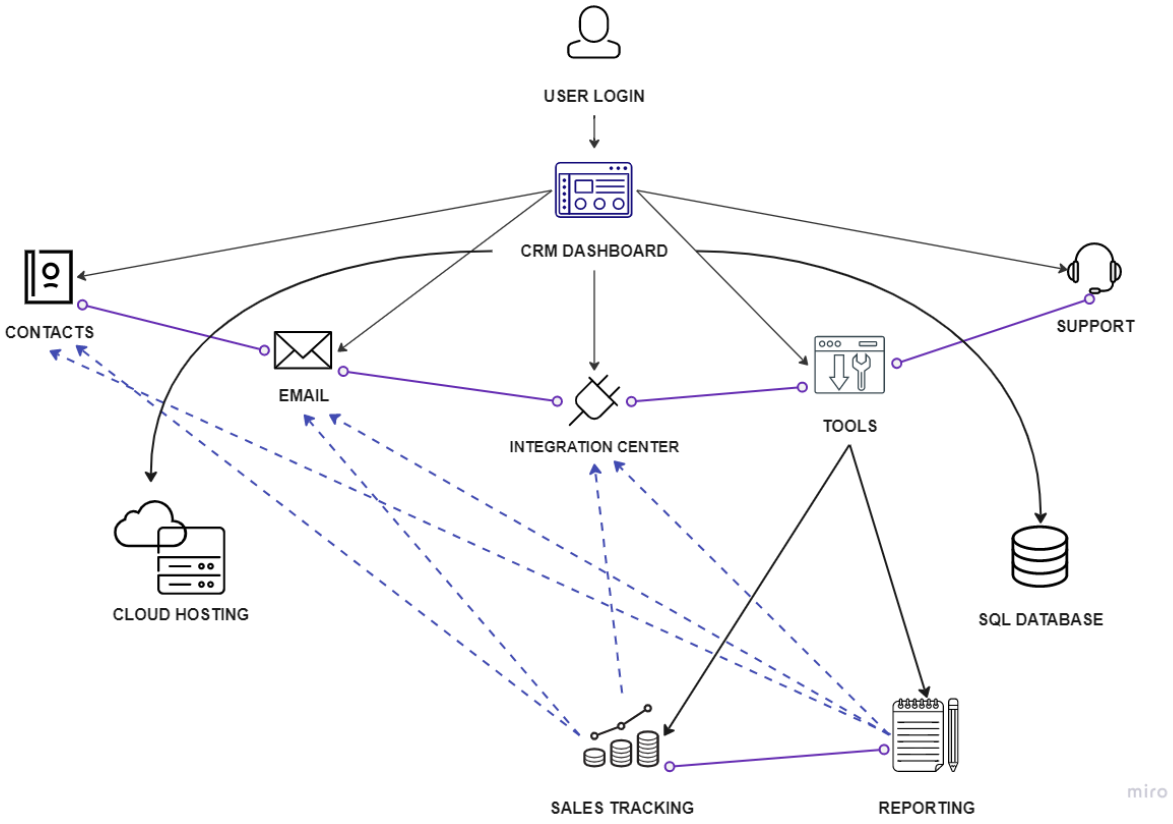

Figure 1: CRM Flowchart

D.1. CRM DASHBOARD GUI

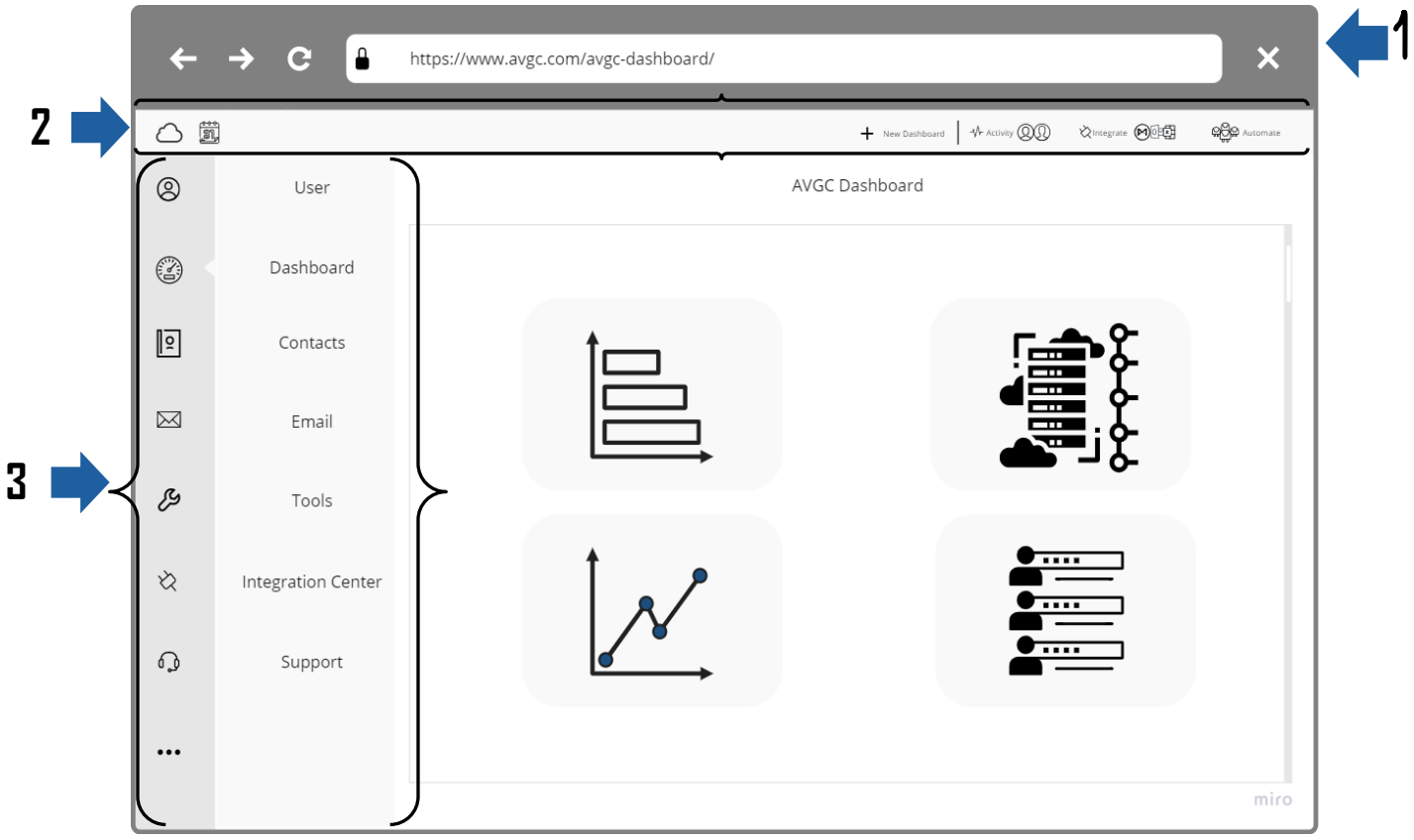

Figure 2: Sample Dashboard GUI Mock-Up

GUI Control Mapping			
ID	Control	Property	Data Source
1	Window	On click, exit window	Internal
2	Horizontal Icon Bar	On click of button, display pop-up window	Cloud, Calendar, New Dashboard, Activity, Integrate Tools, Automate
3	Vertical Icon Bar	On click of icon, redirect to page	User Account, Dashboard, Contacts, Email, Tools, Integration Center, Support, Secondary Menu

E. TESTING:

Mika Systems will perform three separate test cases for the proposed system. Automated testing type via CI/CD (Continuous Integration and Continuous Delivery) is a cost-effective process that will save testing time and allow rapid, secure, and reliable deployment. It will be used to perform cross-platform compatibility, concurrent load, and application migration testing.

E.1.1. CROSS-PLATFORM COMPATABILITY TEST

Requirement to be tested:

Test compatibility with the latest operating systems and browsers for the commonly used devices at AVGC.

Preconditions:

The latest operating systems and browsers must be installed:

Device	Operating System	Browser
Desktop	Windows 10/11 macOS 13	Chrome/Chromium v.108.0.5359.98, Firefox v.107.0.1, Internet Explorer v.11 Safari v.16.1, Chrome v.108.0.5359.98
Mobile	iOS 16.1.2 Android 13	Safari v.16.1, Chrome v.108.0.5359.52, Firefox v.107.3 Chrome v.108.0.5359.79, Firefox v.107.0
Tablet	iPadOS 16.1.1 Android 13	Safari v.16.1, Chrome v.108.0.5359.52, Firefox v.107.3 Chrome v.108.0.5359.79, Firefox v.107.0

Steps:

1. Log into the user account via portal
2. Click “Support” icon
3. Check if page redirects to the support page
4. Click “Chat” icon
5. Check if chat window opens
6. This will run on all browsers and device types specified

Expected results:

User successfully logs in, page should redirect when support icon is clicked, and a pop-up window should appear when the chat icon is clicked.

Pass/Fail:

If actual result is not as per the expected result, mark **Fail.**

Otherwise update it as **Pass.**

Ready For Delivery: Yes

E.1.2. CONCURRENT LOAD TEST

Requirement to be tested:

Test performance standards of system access for a capacity of up to 2,000 concurrent users.

Preconditions:

Scripts are created and adjusted to handle target loads of 500, 1000, 1500, and 2000 concurrent users.

Steps:

1. Run script for 500 users
2. Log in to the system and perform an activity for 5 minutes
3. Record results
4. Adjust target load to 1,000 users and run script
5. Log in to the system and perform an activity for 5 minutes
6. Record results
7. Adjust target load to 1,500 users and run script
8. Log in to the system and perform an activity for 5 minutes
9. Record results
10. Adjust target load to 2,000 users and run script
11. Log in to the system and perform an activity for 5 minutes
12. Record results

Expected results:

The system receives and handles all requests as intended and the average response time is 4 seconds or less with a peak load of 2,000 concurrent users.

Pass/Fail:

If actual result is not as per the expected result, mark **Fail.**

Otherwise update it as **Pass.**

Ready For Delivery: Yes

E.1.3. APPLICATION MIGRATION TEST

Requirement to be tested:

Test for data integrity, discrepancies, and errors when migrating specific workloads to the cloud.

Preconditions:

- Inform user/customer base
- Back up existing system data
- Perform system check and clean system
- Modernize workloads with containers
- Prepare workload for transfer

Steps:

1. Log in to the Cloud portal via dashboard

2. Transfer and synchronize data that the workload will need

3. Migrate applications to cloud infrastructure

4. Transfer domain and IPs to application

5.. Test and validate the migration is complete

6. Perform system checks to ensure no vulnerabilities exist

7. Open migrated workload to users and test workload

8. Document, monitor, and adjust

Expected results:

Minimal disruption and mitigation downtime is expected to be 1 day using the advance automation tools. The workloads migrated to the cloud are verifiable, retrievable, accurate, complete, and secure. Cloud services are linked with their pre-migration versions for SLA tracking continuity. Users from existing system has functionality across all platforms. Operation workflows and performance are greatly improved.

Pass/Fail:

Fail:

- Disruption time and downtime exceeds 1 day
- Applications didn't fully migrate to the cloud
- Data is not verifiable, retrievable, accurate, complete, and secure
- Performance has declined and workflow is disorganized

Pass: The actual results is per the expected results.

Ready For Delivery: Yes