Business Requirements Document

(Guide S50 Version 1.0)

for

Bubble Space

Version 1.0.0

Prepared for

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1. DOCUMENT REVISION LOG

Table 1 Document Revision Log

Date	Author	Version	Reason for Change
8/31/2024	Duque, Engalla, Verar	1.0.0	Added everything
12/1/2024	Duque ,Engalla, Verar	2.0.0	Final Version

2. DOCUMENT REVIEWERS

Table 2 Document Reviewers

Name & Title	Role	Approval Date	Version

3. APPROVER & SIGNOFF

Table 3 Client Acceptor (Project Sponsor)

Name & Title	Role	Approval Date	Version
Signature:			

4. INTRODUCTION

4.1 DOCUMENT PURPOSE

The purpose of the Business Requirements Document (BRD) is to present the stakeholder requirements needed for a task management application that integrates social elements in a complete, accurate and unambiguous manner that is also technology-independent. This information is captured and written by the Business Analysis team during the project Analysis phase.

Business language is used to describe the requirements authored in this document and is the definitive specification of the user requirements. The BRD is used to guide the design and development phases of the project and is the primary reference for User Acceptance. This document is intended to be read by all responsible for the management of the project development initiative including business users, user representatives and sponsors, and other interested parties.

4.2 DOCUMENT SCOPE

As determined during the Analysis phase of the project, the scope of this document is limited to describing the Bubble Space stakeholder business needs. This includes identifying stakeholder categories such as primary users (e.g., individual task creators and team leaders) and the secondary users (e.g., collaborators and friends). The scope also encompasses the business data relationship map, which outlines the

data model, the event-response table (e.g. task creation and collaboration workflows), business policies (e.g. rules for task sharing and collaboration), and the process map (e.g. use cases for task management and social interactions).

The approved and signed version of this document will serve as the basis for subsequent phases of the project.

This document intends to define and describe the:

- **Business requirements:** The needs of the stakeholders on the other hand are high level and the business requirements that the application has to address.
- **User requirements:** Information on who will be using the application at the end of the day and how they will be using them or how they will interact with the console.
- **Use cases that support the business processes:** How users will be able to realize their objectives/ aspirations using the application.
- **User profiles and locations:** The characteristics of the users, what they will be doing in the application and their purpose of using the application.
- **Business processes and rules:** The roles and responsibilities for task initiation, allocation and information sharing and other task related expert business rules.
- **Functional requirements:** Descriptions of how the application looks like and what it offers to a user.
- **Non-functional requirements:** Functional requirements that involve the performance, usability and security of the system among other aspects of quality.
- **Data requirements:** In this aspect it will be necessary to explain the requirements that the application must meet when storing, managing and processing data.
- **Requirements baseline and traceability:** A clear reference point in defining requirements, including how the tracking and handling of the same will be done in the project period.
- **Future considerations:** Any future requirements which may affect the application; or changes that may be made to the application in the future.

This document does not include:

- **Technical and design specifications:** These will be addressed in the next phase of the project as part of the system design documentation.
- **Descriptions of functionality, interfaces, or requirements of processes outside the business area:** Only the task management application and its relevant business processes are in scope.

- **Detailed analysis of requirements related to other applications:** This document focuses solely on the task management application.
- **Out-of-scope requirements:** Any features, functionalities, or requirements not directly related to the core business needs of this project.

4.3 DOCUMENT AUDIENCE

Table 4 Document Audience

Document Audience	Location
Business Owners	The primary audience for this document. They must verify that the business requirements for Bubble Space, including social elements and task management features, are fully captured, accurate, and unambiguous.
Data Architects	Will utilize the document to understand data-related requirements specific to user interactions, task management, and social networking within Bubble Space, and design the appropriate data structures.
Application Architects	Will reference the document to design application-level solutions that align with the unique requirements of task management and social collaboration in Bubble Space.
Technical Architects	Will find the document useful for understanding the overall requirements to ensure the technical architecture supports the business goals and social elements of Bubble Space.
End-Users	Although not the primary audience, end-users should be able to comprehend the requirements as they are documented in a technology-independent

	manner, reflecting how they will interact with Bubble Space's task and social features.

4.4 BUSINESS ANALYSIS APPROACH

The purpose of the Analysis phase in the Bubble Space project was to write down the list of the requirements concerning the business area with focus on the task management and social interaction tools. This phase sought to furnish augmentation documentation for the solution in the requisite level of detail for the subsequent phases of the project. Within the Analysis phase it was necessary to perform a preliminary study of available information as well as define new or altered requirements which would enable Bubble Space to function effectively.

The approach included:

- **Business analysis planning and monitoring:** Such that the management of the analysis was done in such a way that it did not deviate from the project objective and that the checks done at specified intervals to ensure that the analysis was in line with the project goals were effectively done.
- **Elicitation:** Requirement analysis through interviews with the persons that will use the app, questionnaires and group discussions and the emphasis on the needs and preferences of the user in the social interactions and in performing tasks, which are to be completed through the app.
- **Requirements management and communication:** Coordinating the requirement and making sure that every stakeholder is updated and every change is documented and sorted out.
- **Requirements analysis:** Verifying all gathered requirements to make sure that all the requirements that are needed are included, understood and meet the business goals of Bubble Space.
- **Solution assessment and validation:** Evaluating potential solutions with reference to the identified requirements and ensuring the solutions stem from the identified business needs.

4.5 DEFINITIONS, ABBREVIATIONS & ACRONYMS

The following terms, acronyms, and abbreviations are used throughout this document.

Table 5 Terms, Acronyms & Abbreviations

Name	Definition
Collaborative	Working together with others to achieve a common goal, emphasizing teamwork and shared responsibility.
Create	The process of bringing something new into existence, whether it's a concept, design, or project.
Task	A specific piece of work or an objective that needs to be completed, often within a set timeframe.
Track	Monitoring and recording progress or status, typically to ensure that tasks or goals are being met.
User	An individual who interacts with a system, tool, or platform, typically requiring tailored access and permissions.
Management	The act of organizing, planning, and overseeing tasks, resources, or people to achieve specific objectives.
Space	A shared online environment where users collaborate, communicate, and work together on tasks and projects, often in real-time.

5. USER REQUIREMENTS

5.1 USE CASE OVERVIEW

Appendix A Use Cases

Use Case Number	1
Name	Account Creation and Management
Description	The User creates an account to gain access to Bubble Space's features.
Actor(s)	User
Pre-conditions	The user has access to Bubble Space's Website
Flow of Events	1. User creates an account 2. User logins 3. User can edit account details 4. User can delete account
Post-conditions	When an account is created and is verified through login
Exit Criteria	When an account is created
User Requirement #	1

Use Case Number	2
Name	Team Creation and Management
Description	The User creates a team so that people can collaborate on projects and tasks.
Actor(s)	User
Pre-conditions	The User has successfully Logged In
Flow of Events	1. User has Successfully Logged In 2. User creates a team 3. User inputs team name 4. User can upload a team picture 5. User adds team members 6. User can manage team members including transferring ownership or removing members from the team. 7. User can create a Project
Post-conditions	A Team is created with members and is ready to start projects
Exit Criteria	When a team is created or discarded.
User Requirement #	2

Use Case Number	3
Name	Project Creation and Management
Description	The user creates a Project so team members can start creating tasks.
Actor(s)	User
Pre-conditions	The user has successfully Logged In and is in a Team
Flow of Events	1. User creates a Project 2. User can edit the project details 3. User can start the Project 4. User can view Task List 5. User can Cancel Project 6. User can Complete Project
Post-conditions	A Project is created and is ready to start adding tasks
Exit Criteria	When a project is created or discarded.
User Requirement #	3

Use Case Number	4
Name	Task Creation and Management inside a Team
Description	The user creates tasks inside a Project so that the Project will have a linear flow.
Actor(s)	User
Pre-conditions	The user has successfully Logged In and is in a team
Flow of Events	7. User views Task List 8. User creates a Task 9. User can edit a Task 10. User can delete a Task
Post-conditions	A Task is created with all details inputted.
Exit Criteria	When a task is created or discarded.
User Requirement #	4

Use Case Number	5
Name	Task Creation and Management outside a Team
Description	The user creates tasks for their individual use.
Actor(s)	User
Pre-conditions	The user has successfully Logged In
Flow of Events	11. User creates a Task 12. User can view a Task 13. User can edit a Task 14. User can delete a Task
Post-conditions	A Task is created with all details inputted.
Exit Criteria	When a task is created or discarded.
User Requirement #	5

Use Case Number	6
Name	Messaging Users
Description	The user messages other users on the platform.
Actor(s)	User
Pre-conditions	The user has successfully Logged In
Flow of Events	1. User searches another user 2. User can message that user
Post-conditions	The user successfully sent a message to another user.
Exit Criteria	When a message is sent or deleted.
User Requirement #	6

6. BUSINESS PROCESS MODEL

6.1 CURRENT STATE

Bubble Space is a platform facilitating various business functions, including User Management, Team Management, Project and Task Management, Messaging, and Note Creation.

- **User Management**: Users can create and manage profiles.
- **Team Management**: Users can create and manage teams.
- **Project and Task Management**: Team members can create and manage projects, where tasks are assigned to team members.
- **Note Management**: Users can create and manage notes.
- **Individual Task Management:** Users can create and manage individual tasks.
- **Messaging**: Users can interact with each other through a messaging system.

Systems Being Used:

- **User Management System**: Maintains user profiles and handles team assignments.
- **Team Management System**: Manages team creation, member assignments, and ownership roles.
- **Project and Task Management System**: Manages projects and tasks assigned to users.
- **Messaging System**: Facilitates user communication.
- **Note Management System**: Allows users to create and manage notes.

6.2 FUTURE STATE

Upon review of the current systems, the following improvements were noted:

Proposed Improvements:

- **Integrate Communication and Notes**: Link the Interact and Notes tables more directly to projects and tasks, ensuring that all relevant information is centralized.
- **Enhanced Task Management**: Introduce task dependencies and escalation paths to improve project tracking.

- **Enhanced Role Management**: Add more detailed role assignments within teams to better track responsibilities and accountability.
- **Communication inside a Team**: Add a messaging system dedicated to each team.
- **Enhanced Tracking of Project**: Add a timeline to projects which tracks its progress for a better understanding of the current state of the project.

6.3   ACTOR PROFILES & LOCATIONS

Table 6 Actor Profiles & Locations

Organizational Job Function	Nature of the Interaction
Project Manager Oversees project execution, manages tasks, and coordinates team activities.	- Regularly creates and manages projects. - Assigns and monitors tasks and reviews progress. - Reviews and verifies task completions. - Escalates overdue tasks and ensures project goals are met.
Team Member Executes tasks assigned within projects, provides updates, and collaborates with other team members.	- Receives and works on tasks assigned by Project Managers. - Updates task statuses and communicates progress. - Participates in project-related discussions and provides feedback.
Administrator Manages user accounts, oversees system settings, and ensures proper access controls and data security.	- Creates and manages user accounts, roles, and permissions. - Handles system configurations and monitors system performance. - Provides support and resolves issues related to user access or system functionality.

End User	
Utilizes Bubble Space for personal task management, project tracking, and team collaboration.	● Interacts with the system to manage personal tasks and participate in projects. ● Communicates with team members and Project Managers as needed. ● Uses the platform for collaborative purposes and accessing project information.

7. FUNCTIONAL REQUIREMENTS

7.1 OPERATIONAL ENVIRONMENT

This system must conform to the following Ministry standards:

● **Corporate Data Modelling and Administration**: The data model adheres to the Ministry's data modeling standards, ensuring all entities and relationships within the system are properly normalized and secured.
● **Corporate Database Technology**: The database must be built using [e.g., Oracle, SQL Server, PostgreSQL], ensuring data integrity, consistency, and compliance with Ministry policies.
● **Application Development Environment**: The application should be developed in a [e.g., .NET, Java, Python] environment compatible with Ministry requirements, ensuring scalability and maintainability.

7.2 SYSTEM INTERFACE

The system will interact with other external systems and processes, including:

● **Data Format**: The system must support data interchange via XML and JSON formats, particularly for web services integration.
● **External Systems**: It should interface with ESF (External Services Framework) for external communication and integration.

- **Handheld Devices**: The system must support interaction with handheld devices, particularly for accessing the platform on the go.

7.3 COMMUNICATIONS INTERFACE

The system requires the following communication functions:

- **Web Browser**: The application must be accessible through major web browsers (e.g., Chrome, Firefox, Edge).
- **Network Server Communications Protocols**: Support for HTTP/HTTPS for secure communication between the server and client.
- **Message Formatting**: Use standard JSON or XML formats for message exchange.

7.4 SOFTWARE INTERFACE

The system will interface with various software components, including:

- **Databases**: The system will connect with a [e.g., SQL Server 2019, PostgreSQL 13] database for storing and retrieving user, team, project, and task data.
- **Operating Systems**: Compatible with [e.g., Windows Server 2019, Ubuntu 20.04] for server-side operations.
- **Tools and Libraries**: The system should leverage tools like [e.g., ReactJS for front-end development, Node.js for server-side processing].
- **APIs**: Integration with RESTful APIs for communication with other services and ensuring seamless data flow between systems.
- **Shared Data**: The system will share data between various software components using a global data area to ensure consistent data access and updates.

7.5 HARDWARE INTERFACE

The system must support the following hardware interfaces:

- **Supported Devices**: The system should work with desktops, laptops, tablets, and mobile devices.

- **Data Interaction**: The application should support input/output operations via standard peripherals (e.g., keyboard, mouse) and touch interfaces for mobile devices.

7.6 FUNCTION/USER SECURITY MATRIX

The following symbols represent the level of access by each of the user groups

C	Create
R	Read
U	Update
D	Delete

Table 13 Function/User Security Matrix

	Admin	Team Leader	Regular User
User Management	C/R/U/D	C/R/U/D	C/R/U/D
Team Management	C/R/U/D	C/R/U/D	R
Project Management	C/R/U/D	C/R/U/D	C/R/U/D
Task Management	C/R/U/D	C/R/U/D	C/R/U/D

Messaging	C/R/U/D	C/R/U/D	C/R/U/D
Note Creation	C/R/U/D	C/R/U/D	C/R/U/D

7.7 USER GROUP & SYSTEM ACCESS SUMMARY

Defines any special user access security related to entities within the data.

Table 14 User Group & System Access Summary

User Group	System Access
Admin	Full access to all system components, including user, team, project, task, messaging, and notes management.
Team Leader	Access to team management, project and task management within their team, and messaging functions.
Regular User	Access to project and task management within their team, messaging, and notes creation.

8. DATA REQUIREMENTS

8.1 LOGICAL DATA MODEL

Appendix B Logical Data Model
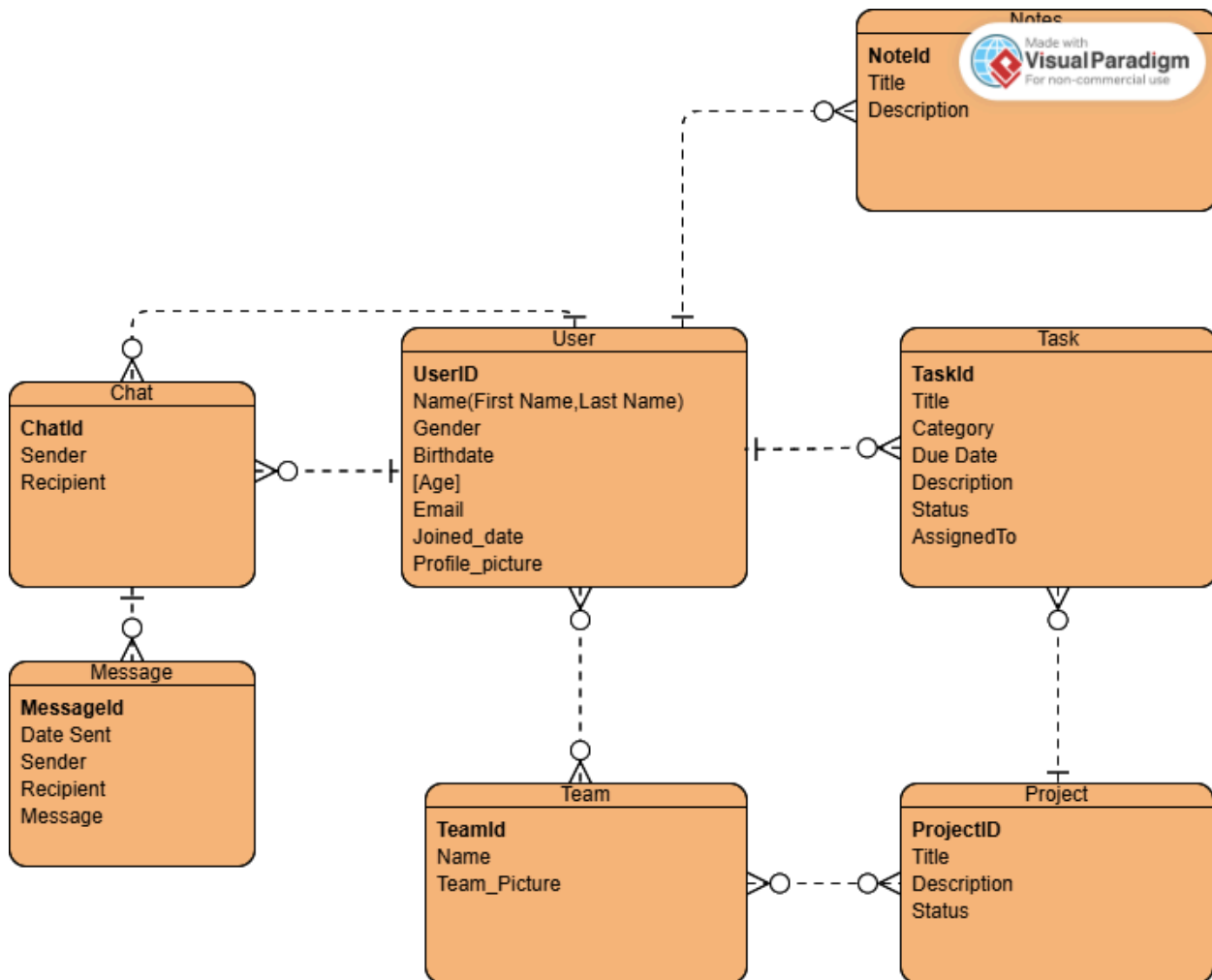
User: Represents individuals using the platform.

- Attributes: Name, Gender, Birthdate, Age, Email, Joined Date, Profile Picture.
- Definitions: Key entity connecting other components (e.g., Notes, Tasks, Teams).

Note: A record or memo associated with a user.

- Attributes: NoteID, Title, Description.
- Definitions: Linked to users; represents personal or collaborative notes.

Task: Represents assigned work or goals.

- Attributes: TaskID, Title, Category, Due Date, Description, Status, AssignedTo.
- Definitions: Assigned to users, indicating responsibility and progress.

Team: Groups for collaboration.

- Attributes: TeamID, Name, Team Picture.
- Definitions: Facilitates team-based work or projects.

Project: Work initiatives within teams.

- Attributes: ProjectID, Title, Description, Status.
- Definitions: Linked to teams, used for organizing tasks.

Chat: Represents user conversations.

- Attributes: ChatID, Sender, Recipient.
- Definitions: Tracks communication between users.

Message: A message within a chat.

- Attributes: MessageID, Date Sent, Sender, Recipient, Message Content.
- Definitions: Individual messages within chats.