INFOGRASS Technologies
H&R Detailing
Discovery Phase - Understanding document

Version 0.2

Table of Contents

High-Level Design Document: Clarification Management Application

1.Executive Summary

The Clarification Management Application is an internal tool designed to streamline communication between branch offices and headquarters, providing a robust platform for managing project clarification logs with advanced filtering and tracking capabilities.

2. System Overview

2.1 Purpose

- Replace existing Excel-based tracking system

- Provide a centralized, digital platform for project clarification questions

- Enable efficient communication and documentation between branch and headquarters

2.2 Key Objectives

- Comprehensive question tracking

- Advanced filtering and search capabilities

- Role-based access control

- Audit trail and historical tracking

2.3 Authentication

- Sign-in process requiring email and password (stored securely in the database using encryption).
- Multi-factor authentication (MFA) for added security, combined with JSON Web Tokens (JWT) for session management and secure access control.
- Role-based access control to manage privileges within the system.

3. Detailed Explanation

3.1 Cl No (Clarification Number)

Description: Unique sequential identifier for each clarification question

Purpose:
- Provides a systematic way to track and reference individual clarification requests

- Ensures no duplicate questions are created

- Allows for easy sorting and referencing

Validation Rules:

- Mandatory field

- Unique across the system

- Generated automatically upon question creation

3.2 Date

Description: Date when the clarification question is created

Purpose:

- Tracks the timeline of project communication

- Helps in understanding the chronology of questions

- Used for aging analysis and response time tracking

Validation Rules:

- Cannot be a future date

- Defaults to current system date

- Allows filtering of questions by date ranges

3.3 HRD Detailer Initials

Description: Three-letter identifier assigned to a specific project or detailer

Purpose:

- Quickly identifies the project or responsible personnel

- Enables tracking of questions by specific teams or individuals

- Provides a shorthand reference for project identification

Validation Rules:

- Must be exactly 3 characters

- Case-sensitive

- Predefined list of valid initials in the system

3.4 Design Reference

Description: Categorization of the clarification question

Purpose:

- Classifies questions into specific project domains

- Helps in routing questions to appropriate departments

- Enables focused filtering and reporting

Potential Categories:

- General

- Structural

- Architectural

- Mechanical

- Electrical

- Plumbing

- Other

3.5 Seq, Zone, Area

Description: Specific project location or sequence identifier

Purpose:

- Precisely locates the context of the clarification question

- Allows granular filtering of project-specific queries

- Helps in understanding the spatial context of the question

 Example Formats:

- Sequence: S01, S02

- Zone: GU560, NE200

- Area: Main Building, West Wing

3.6 Stage

Description: Current project phase for the clarification question

Purpose:

- Tracks the project lifecycle stage

- Helps in understanding the context of the question

- Enables stage-specific reporting and analysis

 Potential Stages:

- Design Review

- Fabrication

- Approval

- Construction

- Final Review

- Completed

3.7 H&R SK# (Sketch Number)

Description: Unique identifier for associated sketch or drawing

Purpose:

- Links clarification questions to specific technical documents

- Provides context and reference for the question

- Allows tracking of questions related to specific sketches

 Validation Rules:

- Optional field

- Must reference existing sketches in the system

3.8 Question

Description: Detailed text of the clarification request

Purpose:

- Captures the specific query or point of confusion

- Provides complete context for headquarters review

- Serves as a historical record of communication

 Validation Rules:

- Mandatory field

- Maximum length of 255 characters

- Supports rich text formatting

3.9 H&R RFI# (Request for Information Number)

Description: Tracking number for escalated or complex questions

Purpose:

- Manages questions requiring additional investigation

- Provides a formal mechanism for complex clarifications

- Tracks the resolution process for challenging queries

Validation Rules:

- Optional field

- Unique identifier

- Follows organization's RFI numbering convention

3.10 Date Sent

Description: Date when RFI or clarification is formally sent

Purpose:

- Tracks the timing of communication

- Measures response times

- Provides audit trail for project communications

Validation Rules:

- Cannot be in the future

- Must be after the original question date

3.11 Resp By (Responded By)

Description: Name or identifier of the person responding

Purpose:

- Accountability for responses

- Tracking individual performance

- Understanding communication patterns

Validation Rules:

- Must be a valid user in the system

- Supports full names or user identifiers

3.12 Response

Description: Detailed text of the clarification response

Purpose:

- Provides clear, documented answers to questions

- Creates a knowledge base for future reference

- Ensures transparent communication

Validation Rules:

- Mandatory for closed questions

- Maximum length of 255 characters

- Supports rich text formatting

3.13 Status

Description: Current state of the clarification question

Purpose:

- Tracks progress of communication

- Enables filtering of open and closed questions

- Provides quick visual status

Possible Values:

- Open

- Closed

3.14 Response Date

Description: Date when the response is provided

Purpose:

- Tracks response timelines

- Measures communication efficiency

- Provides historical context

Validation Rules:

- Cannot be before the original question date

- Defaults to current date when response is submitted

3.15 Work Done By

Description: Identifier of the person completing the work related to the question

Purpose:

- Tracks task completion

- Provides accountability

- Helps in performance tracking

Validation Rules:

- Must be a valid user in the system

- Supports full names or user identifiers

3.16 Additional Notes

Description: Supplementary information about the question or response

Purpose:

- Captures additional context

- Provides space for supplementary details

- Ensures comprehensive documentation

Validation Rules:

- Optional field

- No length restrictions

- Supports rich text formatting

4. User Roles and Permissions

4.1 Branch User (Admin)

- Full CRUD (Create, Read, Update, Delete) permissions

- Can create new clarification questions

- Can edit existing questions

- Full access to all application features

4.2 Headquarters User

- Read-only access to most features

- Can respond to questions

- Can create RFI (Request for Information)

- Cannot modify existing questions

5. Filtering and Search Capabilities

5.1 Advanced Filtering Options

Status Filtering

Open questions

Closed questions

Mixed status

Date Range Filtering

Filter by creation date

Filter by response date

Custom date range selection

Detailed Search Filters

Search by Clarification Number

Search by HRD Detailer Initials

Filter by Sequence/Zone/Area

Search by Sketch Number (e.g., SK01)

Filter by Respondent

Search by RFI Number

High-Level Database Design

1. Table Definitions

Table: CL_Item

Column Name	Data Type	Constraints	Description
CL_No	INT (Primary Key)	Auto-increment	Unique identifier for each CL item.
Date	DATE	NOT NULL	The date the CL item was created.
HRD_Initials	VARCHAR(10)	NOT NULL	Initials of the HRD detailer.
Design_Reference_ID	INT	Foreign Key	Links to the Design_Reference table.
Seq_Zone_Area	VARCHAR(50)	NULLABLE	Zone or area sequence.
Stage_ID	INT	Foreign Key	Links to the Stage table.
Question	TEXT	NOT NULL	The query or issue raised.

Table: Stage

Column Name	Data Type	Constraints	Description
Stage_ID	INT (Primary Key)	Auto-increment	Unique identifier for each stage.
Stage_Name	VARCHAR(50)	NOT NULL	Name of the stage (e.g., General, Approval).

Table: Status

Column Name	Data Type	Constraints	Description
Status_ID	INT (Primary Key)	Auto-increment	Unique identifier for status.
Status_Name	VARCHAR(10)	NOT NULL	Status of the item (e.g., Open, Closed).

Table: Response

Column Name	Data Type	Constraints	Description
Response_ID	INT (Primary Key)	Auto-increment	Unique identifier for each response.
CL_No	INT	Foreign Key	Links to the CL_Item table.
Response_Text	TEXT	NOT NULL	The response provided for the CL item.
Response_Date	DATE	NOT NULL	Date of the response.

Table: Communication_Log

Column Name	Data Type	Constraints	Description
Log_ID	INT (Primary Key)	Auto-increment	Unique identifier for each communication log.
CL_No	INT	Foreign Key	Links to the CL_Item table.
Communication	TEXT	NOT NULL	Details of communication (e.g., email logs).
Timestamp	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Date and time of the communication.

Table: Design_Reference

Column Name	Data Type	Constraints	Description
Design_Reference_ID	INT (Primary Key)	Auto-increment	Unique identifier for design references.
Reference_Name	VARCHAR(50)	NOT NULL	Name or code of the design reference.
Details	TEXT	NULLABLE	Additional details about the reference.

2. ER Diagram:

Status
- Status_ID INT
- Status_Name VARCHAR(10)
- Indexes

Response
- Response_ID INT
- CL_No INT
- Response_Text TEXT
- Response_Date DATE
- Indexes

Communication_Log
- Log_ID INT
- CL_No INT
- Communication TEXT
- Timestamp TIMESTAMP
- Indexes

CL_Item
- CL_No INT
- Date DATE
- HRD_Initials VARCHAR(10)
- Design_Reference_ID INT
- Seq_Zone_Area VARCHAR(50)
- Stage_ID INT
- Question TEXT
- Status_ID INT
- Indexes

Stage
- Stage_ID INT
- Stage_Name VARCHAR(50)
- Indexes

Design_Reference
- Design_Reference_ID INT
- Reference_Name VARCHAR(50)
- Details TEXT
- Indexes

High Level Design Document: UI design

Branch (Admin)
Log in:

Admin View

Log in	Sign up

User Name:

Password:

☐ Remember me   Forgot Password?

Log in

Sign up:

Log in	Sign up

E-mail:

User Name:

Password:

Sign up

Main View:

Add Question   View All   Filter ∨   Log Out

CL No: **Date:**

H&R RFI No: **Status:**   Status ∨

HRD Detailer Initials: Open

Design Reference: Closed

Sequence:

Zone:

Area:

Stage:

Sketch:

Additional Notes:

Question:

Send ➤

Sent date and time

View All:

Add Question   View All   Filter ∨   Log Out

Questions

CL No.	Question	Respond by Date Sent Status
5.	**Question**	Emp 1 16.01.2025 Open ∨ / Open / Closed
4.	**Question**	Emp 2 04.01.2025 Open ∨
3.	**Question**	Emp 1 30.12.2024 Open ∨
2.	**Question**	Emp 1 22.11.2024 Open ∨
1.	**Question**	Emp 2 13.12.2024 Closed ∨

Question View:

Questions		
CL No.	Question	Respond by Date Sent Status
6.	Question	Emp 3 20.01.2025 Open
5.	Question	Emp 1 19.01.2025 Open
4.	Question	Emp 2 18.01.2025 Open
3.	Question	Emp 3 20.12.2024 Closed
2.	Question	Emp 1 19.12.2024 Closed
1.	Question	Emp 2 18.12.2024 Closed

CL No: Sent Date:

H&R RFI No: Status: Closed

HRD Detailer Initials: Response Date:

Design Reference: Respond By:

Sequence:

Zone:

Area:

Stage:

Sketch:

Additional Notes:

Question

Sent date and time: 22.11.2024 and 13:30

Response

Filter View:

Add Question	View All	Filter	Log Out
CL No	HRD Detailer Initials	Design Reference	Date
Stage	Sequence	Zone	Area
Sketch	RFI No	Close	Open

Filter Based on HRD Detailer Initials:

Questions

suggested filter... KAR,VKT,RTH,ASW

CL No.	HRD Detailer Initials	Question	Respond by Date Sent Status
8.	KAR	Question	Emp 3 20.01.2025 Open ∨
7.	KAR	Question	Emp 1 19.01.2025 Open ∨
6.	KAR	Question	Emp 2 18.01.2025 Open ∨
5.	KAR	Question	Emp 1 16.01.2025 Open ∨
4.	KAR	Question	Emp 2 04.01.2025 Open ∨
3.	KAR	Question	Emp 1 30.12.2024 Open ∨
2.	KAR	Question	Emp 1 22.11.2024 Open ∨
1.	KAR	Question	Emp 2 13.12.2024 Closed ∨

Filter Based on Design Reference:

Design Reference: Search

Questions

suggested filter... Anchor bolt, General, A540

CL No.	Design Reference	Question	Respond by Date Sent Status
8.	General	Question	Emp 3 20.01.2025 Open ∨
7.	General	Question	Emp 1 19.01.2025 Open ∨
6.	General	Question	Emp 2 18.01.2025 Open ∨
5.	General	Question	Emp 1 16.01.2025 Open ∨
4.	General	Question	Emp 2 04.01.2025 Open ∨
3.	General	Question	Emp 1 30.12.2024 Open ∨
2.	General	Question	Emp 1 22.11.2024 Open ∨
1.	General	Question	Emp 2 13.12.2024 Closed ∨

Filter Based on Date Range:

Date:		Calender

Date range (01.01.2025 till 31.01.2025) questions are given

Questions

CL No.	Date	Question	Respond by / Date Sent / Status
8.	20.01.2025	Question	Emp 3 / 20.01.2025 / Open v
7.	19.01.2025	Question	Emp 1 / 19.01.2025 / Open v
6.	18.01.2025	Question	Emp 2 / 18.01.2025 / Open v
5.	16.01.2025	Question	Emp 1 / 16.01.2025 / Open v
4.	09.01.2025	Question	Emp 2 / 09.01.2025 / Open v
3.	08.01.2025	Question	Emp 1 / 08.01.2025 / Open v
2.	06.01.2025	Question	Emp 1 / 06.01.2025 / Open v
1.	04.01.2025	Question	Emp 2 / 04.01.2025 / Closed v

Filter Based on Stage:

Stage:		Search

suggested filter... Review, Approval, Fabrication

Questions

CL No.	Stage	Question	Respond by / Date Sent / Status
8.	Approval	Question	Emp 3 / 20.01.2025 / Open v
7.	Approval	Question	Emp 1 / 19.01.2025 / Open v
6.	Approval	Question	Emp 2 / 18.01.2025 / Open v
5.	Approval	Question	Emp 1 / 16.01.2025 / Open v
4.	Approval	Question	Emp 2 / 04.01.2025 / Open v
3.	Approval	Question	Emp 1 / 30.12.2024 / Open v
2.	Approval	Question	Emp 1 / 22.11.2024 / Open v
1.	Approval	Question	Emp 2 / 13.12.2024 / Closed v

Filter Based on Sketch Number:

H&R SK:		Search

suggested filter... 01, 03, 05

Questions

CL No.	H&R SK	Question	Respond by / Date Sent / Status
8.	03	Question	Emp 3 / 20.01.2025 / Open ⌄
7.	03	Question	Emp 1 / 19.01.2025 / Open ⌄
6.	03	Question	Emp 2 / 18.01.2025 / Open ⌄
5.	03	Question	Emp 1 / 16.01.2025 / Open ⌄
4.	03	Question	Emp 2 / 04.01.2025 / Open ⌄
3.	03	Question	Emp 1 / 30.12.2024 / Open ⌄
2.	03	Question	Emp 1 / 22.11.2024 / Open ⌄
1.	03	Question	Emp 2 / 13.12.2024 / Closed ⌄

Headquarters (client)
Log in:

Head office View

Log in	Sign up

User Name:

Password:

☐ Remember me   Forgot Password?

Log in

Sign up:

E-mail:

User Name:

Password:

Sign up

Main View:

	Questions	
CL No.	**Question**	Respond by Date Sent Status
8.	**Question**	Emp 3 20.01.2025 Open
7.	**Question**	Emp 1 19.01.2025 Open
6.	**Question**	Emp 2 18.01.2025 Open
5.	**Question**	Emp 1 16.01.2025 Open
4.	**Question**	Emp 2 04.01.2025 Open
3.	**Question**	Emp 1 30.12.2024 Open
2.	**Question**	Emp 1 22.11.2024 Closed
1.	**Question**	Emp 2 03.11.2024 Closed

Providing response:

Screen 1

Questions		
CL No.	Question	Respond by Date Sent Status
6.	Question	Emp 3 20.01.2025 Open
5.	Question	Emp 1 16.01.2025 Open
4.	Question	Emp 2 05.01.2025 Open
3.	Question	Emp 3 20.12.2024 Closed
2.	Question	Emp 1 19.12.2024 Closed
1.	Question	Emp 2 18.12.2024 Closed

CL No: **Sent Date:**
H&R RFI No: **Status: Open**
HRD Detailer Initials: **Response Date:**
Design Reference: **Respond By:**
Sequence:
Zone:
Area:
Stage:
Sketch:
Additional Notes:

Question
Sent date and time: 22.11.2024 and 13:30

[Enter RFI details] [Response]

Screen 2

Questions		
CL No.	Question	Respond by Date Sent Status
6.	Question	Emp 3 20.01.2025 Open
5.	Question	Emp 1 16.01.2025 Open
4.	Question	Emp 2 05.01.2025 Open
3.	Question	Emp 3 20.12.2024 Closed
2.	Question	Emp 1 19.12.2024 Closed
1.	Question	Emp 2 18.12.2024 Closed

CL No: **Sent Date:**
H&R RFI No: **Status: Open**
HRD Detailer Initials: **Response Date:**
Design Reference: **Respond By:**
Sequence:
Zone:
Area:
Stage:
Sketch:
Additional Notes:

Question
Sent date and time: 22.11.2024 and 13:30

Response

[Send ➤]

Response Date and time

Transferring to RFI:

Questions		
CL No.	Question	Respond by Date Sent Status
6.	Question	Emp 3 20.01.2025 Open
5.	Question	Emp 1 16.01.2025 Open
4.	Question	Emp 2 05.01.2025 Open
3.	Question	Emp 3 20.12.2024 Closed
2.	Question	Emp 1 19.12.2024 Closed
1.	Question	Emp 2 18.12.2024 Closed

CL No: Sent Date:
H&R RFI No: Status: **Open**
HRD Detailer Initials: Response Date:
Design Reference: Respond By:
Sequence:
Zone:
Area:
Stage:
Sketch:
Additional Notes:

Question
Sent date and time: 22.11.2024 and 13:30

[Enter RFI details]   [Response]

Questions		
CL No.	Question	Respond by Date Sent Status
6.	Question	Emp 3 20.01.2025 Open
5.	Question	Emp 1 16.01.2025 Open
4.	Question	Emp 2 05.01.2025 Open
3.	Question	Emp 3 20.12.2024 Closed
2.	Question	Emp 1 19.12.2024 Closed
1.	Question	Emp 2 18.12.2024 Closed

CL No: Sent Date:
H&R RFI No: Status: **Open**
HRD Detailer Initials: Response Date:
Design Reference: Respond By:
Sequence:
Zone:
Area:
Stage:
Sketch:
Additional Notes:

Question
Sent date and time: 22.11.2024 and 13:30

Response

Generate RFI No. :
Generated Date:
Generated Time:
Generated By: [Submit]
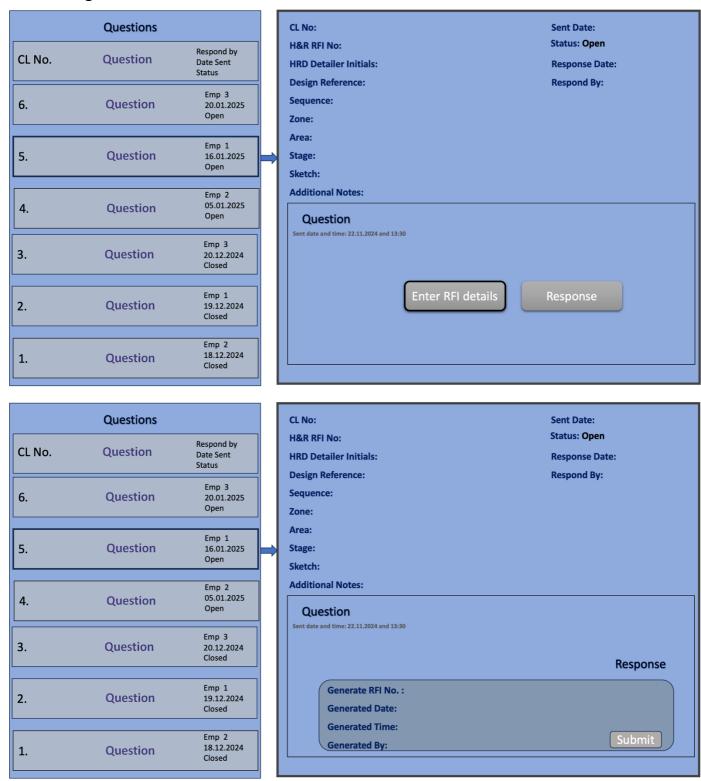
Conclusion

This document serves as the Basic Understanding Document based on the provided inputs high level design document are subject to refinement or enhancement based on your feedback. All changes are managed systematically using version control.