Statement of Work

Hard n Soft Technologies Pvt. Ltd.

SP 31A, 2nd Main Road,
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Tamil Nadu 600058

SOW #01.0 – TATA iAssist Android App Development

Date

September 13, 2023

Services Performed By:

Hard n Soft Technologies Pvt. Ltd.

SP 31A, 2nd Main Road,
1st Cross, 5th Floor,
Kochar Technology Park,
Ambattur, Chennai,
Tamil Nadu 600058

Services Performed For:

Tata Motors Ltd.

Strategic & Business Planning
Engineering Research Center,
Pune - 411018,
Maharashtra, India.

This Statement of Work (SOW) is issued pursuant to the Consultant Services Master Agreement between Tata Motors Ltd. ("Client") and Hard n Soft Technologies Pvt. Ltd. ("Contractor"), effective September 13, 2023 (the "Agreement"). This SOW is subject to the terms and conditions contained in the Agreement between the parties and is made a part thereof. Any term not otherwise defined herein shall have the meaning specified in the Agreement. In the event of any conflict or inconsistency between the terms of this SOW and the terms of this Agreement, the terms of this SOW shall govern and prevail.

This SOW #01.0 (here after called the "SOW"), effective as of September 13, 2023, is entered into by and between Contractor and Client, and is subject to the terms and conditions specified below. The Exhibit(s) to this SOW, if any, shall be deemed to be a part hereof. In the event of any inconsistencies between the terms of the body of this SOW and the terms of the Exhibit(s) hereto, the terms of the body of this SOW shall prevail.

HnS Technologies is pleased to submit the SOW for "TATA iAssist Android App Development"

Founded in 1997, HnS Technologies is a Digital Services Firm specializing in Augment Reality Apps, Telematics, Rich Media Content Development, Cross Platform Applications, Digital Learning and Training Solutions, Business Intelligence Visualization & Online Software Services.

We would like to take this opportunity to thank you for providing an opportunity to participate in the development. Please don't hesitate to call or email us if you need any clarification.

Document History

Version	Issue Date	Changes
1.0	08-Sep-23	First Draft

Glossary

Abbreviation	Description
TML	Tata Motors Limited

Project Understanding

To develop an enterprise android application for Touchpoint operators and techline team to list the fault as per the shared data. The option to connect and with techline team for assistance and view reference videos should be enabled. The interactive dashboard with fault analysis should be enabled for the shared data.

Project Scope

In - Scope:

The scope of the project is defined as below:

This will be an enterprise application developed in native android and will have static login for touch point operators and techline user. The role-based menu mapping would be provided as defined below.

iAssist Application

- Splash & Login

  The user will be displayed with the splash screen followed by the login screen on launch of application. The static login will be validated for identifying the Touchpoint operators and Techline user.

- Logout

  The user will have an option to logout from the application manually.

Touchpoint operators

The application will have the below flow for touchpoint operators.

1. **Home Screen**: The home screen will have the list of vehicles available for diagnosis. The user can select the desired vehicle with variant. The UI will also represent the option to enter Vehicle reg no and color which will be ==developed later==.

2. **Date & Time selection:** The user will be provided an option to select the date and time based on which the interactive dashboard data will be loaded. Data for 2-3 hrs. will be represented as drop down with 1st hr./2nd hr. / 3rd hr. options.

3. **Dashboard:** The dashboard will be loaded with the below data based on the previous selection of Vehicle, Variant, date and time. This section alone will be available in landscape view and the entire application will support only in portrait view.

   3.1. **Suggestive Signals to check:** The interactive dashboard will have an option to choose the parameters against X, Y and Z axis. The result will be the graph view with Zoom in / Zoom out options.

   3.2. **Faults details occurred during that time:** This will list the faults for selected duration in graphical representation. On selection of any particular fault, the below options will be available.

   - **Chatbot –** Interactive chatbot ==will not be available for POC==. The static responses will be displayed.
     - The chatbot will have an option to mention are fault.
     - The chatbot will give suggestive stepwise procedure/Images/Videos. Based on content shared by TML.
     - Take intermediate inputs through questions and verify.
     - If not solved, will request user to raise a ticket with expert
   - **Chat with Expert -** The queries (text) can be sent to the experts for clarification. The option to raise query in the form of image, audio and video will also be available. In this release previously recorded video alone can be shared. UI icon to record video will be available which will be ==developed later==.

Techline User

The application will have the below flow for techline user.

1. **Home Screen**: The home screen will have the list of open tickets raised by touchpoint operators. Button to analyze server data automated trends/correlation (ML Part) will be available as UI and will be ==developed later==, will ==not be part of POC==.

2. **Chat –** On choosing a ticket, option to respond to the queries will be available. The response can be with text, audio, image and video. The RCA plots can be analyzed along with the operator to rectify the issue.

3. Automated Trends /correlation analysis using all vehicle data. Will be available as UI and will be developed later, will ==not be part of POC==.

ML Parts (Will be developed later – ==not part of POC==)

1. Fault Trend Analysis, Anomaly detector algorithms provide Fault cause suggestions
2. Community page/solution applied to same fault (from historic data)

Content Management System (CMS)

==Will not be part of POC.== The CMS will be developed and integrated with actual application for dynamic data flow and monitoring.

Out of Scope

- Full Content Management System development
- API inclusions
- Facilitating Video call provisions with Experts
- Bluetooth connectivity or interaction with vehicle or setup
- Any additional module inclusion other than the modules defined in scope
    - Multilingual support
    - Inclusion of any content additional variants other than the shared data
- Content Creation for features
- Image or video creation
- Hosting in server or play store
- Auto logout option
- Statistical data capturing

Proposed Technology to be used

S. No	Tools	Task
1	Android Studio	Android development
2	MS Office	Documentation
3	Manual	Testing

Proposed Solution/Architecture

N/A

Listing of Sections

Below are the sections will get update based on the requirements:

iAssist Android Application

- Login
- TouchPoint Operator
  - Home screen
  - Date & Time selection
  - Dashboard
  - Chatbot
  - Chat with Expert
- Techline Team
  - Home screen
  - Chat
- Logout

Deliverables

From HnS

Tata iAssist Android application

HnS Responsibilities

- Module wise release based on decided priority. The development, review and release will be done and released on sprint basis.

TML Responsibilities

- Input for all the modules
- Vehicle, Variant, Manual, Images and videos for all sections.
- Fault procedure details
- Statistical data for dashboard graph

Application Compatibility

Android

- OS Version from 9.0 & Above (as on date while app first launch)
- Screen Size from 5.5 inch & above
- Mobile devices and Tabs

Period of Performance

o   Development & Testing: Approximately 3 weeks from the day of approval.

Post Implementation Support

Fixing of Bugs reported from users within 1 week after the signoff of the project delivery.

Acceptance Criteria

HnS should fulfill the obligations when the following occurs:

HnS will accomplish the activities described within this SOW, including delivery to TML with the materials listed in the Section entitled "Deliverables," and TML should accept such activities and materials without unreasonable objections. Feedbacks/Approvals from client should be closed within 2 iterations.

Project Reporting and Communication

Communication method

- The Application development status and the reviews will be on weekly basis.

- The MOM of any meeting needs to be duly acknowledged by all stakeholders.

- The face-to-face meeting will be based on deliverable criticalities.

Communication frequency

- At the initial state of the development application there will be calls on daily basis. On freezing the requirement weekly calls shall be scheduled.

Assumptions

- UI/UX will be proceeded as per the approved wireframes.

- The design and logics are to be defined and approved and not to vary during development.

- This will be a POC with hardcoded values and will not have connectivity with vehicle or setup to load dynamic data.

- Images and videos to be shared by TML.

- Content for all the faults and procedures to be shared by TML.

- Hosting of enterprise version of the Web app to be owned by TML.

Project Change Control Procedure

The following process will be followed if a change to this SOW is required:

A Project Change Request (PCR) will be the vehicle for communicating change. The PCR must describe the change, the rationale for the change, and the effect the change will have on the project.

The designated Project Manager of the requesting party (Contractor or Client) will review the proposed change and determine whether to submit the request to the other party.

Both Project Managers will review the proposed change and approve it for further investigation or reject it. Contractor and Client will mutually agree upon any charges for such investigation, if any. If the investigation is authorized, the Client Project Managers will sign the PCR, which will constitute approval for the investigation charges. Contractor will invoice Client for any such charges. The investigation will determine the effect that the implementation of the PCR will have on SOW price, schedule and other terms and conditions of the Agreement.

Upon completion of the investigation, both parties will review the impact of the proposed change and, if mutually agreed, a Change Authorization will be executed.

- A written Change Authorization and/or PCR must be signed by both parties to authorize implementation of the investigated changes.

Development Man Days

S. No	Description	Man Days	Cost
1	Project Management & Documentation		
2	UI/UX		
3	App Development	100	7,00,000
4	Testing		
5	Deployment Support		
	Total	**100**	**7,00,000**

Payment Terms

GST 18% extra will be applicable
100% payment after completion of the project

IN WITNESS WHEREOF, the parties here to have caused this SOW to be effective as of the day, month and year first written above.

Tata Motors Ltd.   Hard n Soft Technologies Pvt. Ltd.

By: _____   By: _____

Name: Name:

Title: Title: