



DEPARTMENT OF CIVIL ENGINEERING
Indian Institute of Technology Madras
I.I.T.P.O., MADRAS-600 036

Form for Inviting Quotations

Ref. No. CE/STORES/2019/ Design, Development, Hosting and Maintenance of
Mobile app for Urban Freight Consolidation

Tender Starting Dt. 20.09.2019
DUE DATE: 04.10.2019 – 4.00 P.M.

To

Dear Sir,

1. Quotations are invited in duplicate for the various items shown below / overleaf / Enclosed list.
2. The Quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned and contain in 2 bid system i.e. Technical bid and Commercial bid in two separate envelopes should be enclosed in a single envelope only so as to reach on or before the due date stipulated above.
3. The Quotations should be valid for ninety days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. Local Firms : Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
7. Firms Outside Madras : Quotations should be for F.O.R. Madras. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
8. The rates of GST and other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for GST/General Taxes will be admitted at any stage and on any ground whatsoever. IIT Madras is eligible for concessional GST. Relevant certificate will be issued. In case of import supply the price should be quoted without custom duty. I.I.T. Madras is exempted from levy of IGST on Imports and eligible for concessional custom duty (not exceeding 5%) and the price should be quoted on **EX-WORXS** and **CIP** basis indicating the mode of shipment.
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.

Yours faithfully,

R. Gitakrishnan

[Dr. Gitakrishnan Ramadurai]

Note: (i) Quotation should be sent by SPEED POST only or to be delivered directly to the concerned.
(ii) Firms are requested to submit the specifications of their product along with supporting technical Documentation / brochure instead of reproducing the specifications sent by us.

DR. GITAKRISHNAN RAMADURAI
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Transportation Engineering Division
Department of Civil Engineering
Indian Institute of Technology Madras
Chennai - 600 036, INDIA

Tender Document for Design, Development, Hosting and Maintenance of Mobile app for Urban Freight Consolidation

Indian Institute of Technology Madras (IITM) is a premier research institute in India. Transportation engineering division in Civil engineering department at IITM is involved in various challenging traffic and transportation research/consulting projects. Transportation division, IITM is currently working on a research project to identify sustainable urban freight strategies and develop a road map for their implementation. In this regard, the research team wants to develop an app for booking freight trips. We seek proposals from competitive companies/ consultants. The requirements as follows:

A. Objective

- The objective of this work is to develop a mobile app to aggregate fragmented freight trips and to streamline urban freight movements
- To update, support and maintain the app
- To store data and maintain the server

B. Scope

The broad scope of work for the bidder shall include, but not limited to the following:

- a. Design and development of an android mobile application. iOS mobile application is optional- quote the cost separately.
- b. Make the app available on Google Play /iOS Store (optional) for downloading
- c. User Acceptance Testing
- d. Hosting of the app in a Server initially for a period of six (06) months from the day of release of the app.
- e. Maintenance and troubleshooting support for 6 months from the day of release of the app
- f. The app should be developed in English (Tamil language is optional, quote the cost separately)
- g. The quoted amount should be inclusive of software development, hardware required / cloud server.

C. Detailed Scope

The Mobile app development shall focus on four (04) target users namely customer, truck owner, consolidation manager, and administrator. Develop a separate app for the first three users while the admin console should be a web application.

1. The icons displayed in the app should be **crisp and clearly visible**.
2. The app should be easily navigable.
3. To determine a platform and write the required codes to develop a mobile app as per the client requirement.

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4. To create 3 functional apps namely customer, truck owner, and consolidation manager to collect, process, communicate and store the required data. The admin interface should be a web-based application.

a. Customer app (CA): For shipper or a receiver to book a truck to transport goods; for easy and convenient truck booking;

- **Registration:** Registration is a one-time process whereby the customer provides their basic login information such as name, company name, company type, phone number.
- **Validation:** The registration shall be completed only after the validation of phone number (OTP verification) to make sure the registration is made by a valid customer.
- **Profile:** The customer can log in using the username and password. Multiple addresses can be added and stored so that the customer can choose from the drop-down menu during booking.
- **Book a vehicle:** Customer specifies the registered address from drop-down option or enter a new address or select lat/ long coordinates from an Open Street Map (OSM) interface for pick-up and delivery. Customer can book for multi-stop (maximum 3) deliveries. Details of the goods for each stop to be specified as follows:

i. Commodity: Specify the type of commodity the customer wants to transport.

ii. Commodity package details: Specify whether the consignment is packed or unpacked. If the shipment is packed a drop-down menu (input from the client) to specify the type of package. If unpacked - the customer has to specify if it is in trays or loose.

iii. Dimension and weight; specify the dimensions of the package box or pallets and the weight of it. If the commodity is loose enter only weight.

iv. Helper: If an extra person(s) is required for loading or unloading of the commodity.

- **Booking confirmation:** The calculated fare details shall be shared to the customer for confirmation of the trip. The customer shall confirm the booking and transfer the payment to complete the booking process. Payment will not be made through the app. Customer can transfer payment to the account details specified in the app. The customer shall provide transaction id as proof of payment made and submit in the app. The consolidation manager verifies the status of payment and sends booking confirmation message which has to be notified to the customer.

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- **Consignment Status:** The customer shall be able to view the vehicle information, pick-up and delivery with driver contact details and status of their order.
 - **Customer support/helpline:** Display customer support contact numbers.
- b. **Truck Owner app (TOA):** Enable the truck owner to seamlessly navigate requests and accept bookings.
- **Registration:** Registration is a one-time process whereby the truck owner provides their basic login information such as name, company name, company type, phone number.
 - **Validation:** The registration process shall be complete only after the validation of phone number (OTP verification) to make sure the registration is made by a valid truck owner.
 - **Profile:** Truck owner shall furnish vehicle details such as vehicle registration number, vehicle type, capacity and open/closed vehicle that shall be stored and can be edited. The truck owner shall furnish details of multiple vehicles he owns/ manages/lease. Multiple Driver information such as driver's license number and phone number can be furnished, stored and edited.
The truck owner shall receive the shipment information only if he logs into the app. On logging out from the app, the truck owner shall not receive any information.
 - **Tour Details:** The consolidation manager will share the tour details of consolidated shipments with the number of stops (if multiple stops are planned) with the total fare to all logged-in truck owners. This information has to be notified to all truck owners logged into the app. Develop a tabular display of all open and closed tours.
 - **Confirmation:** A truck owner can accept the tour assignment, choose/allot the registered vehicle and driver and confirm his willingness to do the trip/ tour assigned for the fare suggested by the consolidation manager. The truck owner shall share the truck and driver information to the consolidation manager. On confirmation of the trip/ tour by a trucker, that specific tour booking option shall become inactive for all truck owners.
 - **Status of consignment:** The truck owner shall be able to view the status of the consignment.
 - **Customer support/helpline:** Display customer support contact numbers.
- c. **Consolidation Manager app (CMA):** Optimize truckload/ trip assignment, manage customers and truck owners.
- **Log in:** Consolidation Managers (CMs) cannot register by themselves. Log-ins will be created by administrators.

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- **Calculation of fare:** The consolidation manager shall review the trip details and update fare equation using price slab table prepared (input will be provided by IITM) based on the various parameters such as travel distance, commodity weight. The fare will be sent to the customer to enable the payment transaction.
- **Payment:** The booking confirmation will be sent to the customer only on receiving the proof of payment transaction. Payment can be done to the account details furnished in the app.
- **Tour optimization:** The consolidation manager reviews all the bookings to club/ add multiple booking requests and prepare a tour schedule. The tour details together with the fare shall be sent to all the logged in (active) truck owners and the tour will be allotted to the first truck owner who accepts it. Consolidation manager shall get the truck and driver information after truck owner accepts and assigns a truck for the tour request. This information shall be shared with the customer i.e. shipper or receiver.
- **Consignment Status:** The status of each consignment (picked up/ In-transit/ delivered / at consolidation center) will be updated using a drop-down menu by consolidation manager.

d. Admin Dashboard: This is a web interface which will have cancellation window, login window, customer & drivers support, shippers contact details, and fare tables.

- This dashboard should help administrators to manage customers and truck owners, trip details (tracking trips), trip status notifications, analytics, and fare.
5. Data related to bookings, trip, fare and payment made should be stored in the form of data as per the client requirement in the server in the desired format for future use and analysis.
 6. All data should be transmitted in a secure format.
 7. Utmost care must be taken to ensure the privacy of data.
 8. Prepare a detailed document of the methodology, troubleshooting instruction, and maintenance of the app.
 9. **Server specifications:** The consultant shall specify the server required to process a data size of 200 requests. He will be responsible to procure the software and hardware required for this project from designing the app, hosting it and maintenance.
 10. **Testing app:** Field testing of the app shall be for a period of 6 months post-acceptance of the final version, during which operational and technical support shall be provided.
 11. **Hosting of the app:** The app shall be hosted on a live server during the trial, and made available on Google play store/iOS store (optional) to enable users to download.
 12. **Copyright Details:** The entire source code, as well as the IPR, will be solely owned by IIT Madras. All rights to the software must be completely transferred to IIT Madras.

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D. Deliverables and time/payment schedules - development and release of app 4 weeks from Award of tender,

S.no	Task	Delivery time	Payment schedule
1.	Submission of the wireframe and design and development plan	Week 3	10%
2.	Beta version and app testing and release	Week 4	40%
3.	Server and app maintenance support	3 months from release	25%
4.	Server and app maintenance support	6 months from release	25%

General- technical terms about safeguarding our data. Report and document submission

General terms and condition (IC&SR)

Eligibility criteria

S.no	Qualification Criteria	Supporting Document
1.	The bidder must be a company registered in India under the Companies Act, 1956 for at least the last 3 years.	Certificate of Incorporation.
2.	Bidder should have an average annual turnover of Rs. 30 lakh or currency equivalent during the last 3 financial years from IT components and services.	Copy of audited financial Statements for the last 3 Financial years. Certificate from CA for revenue from IT components segment
3.	Bidder should have successfully executed at least 3 mobile application projects in the last 3 years.	Copy of Project/Phase Completion certificate and Work Order and Client Reference for Verification
4.	Bidder should have successfully executed at least 1 mobile application projects similar to this proposal.	Copy of project/ link of the app
5.	Bidder should have experience in app development, Graphic Designing, and app testing.	Copy of education qualification and portfolio

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Consultant Details

1. Name of the consulting firm
2. Consulting firm's registered address in India
3. Consulting firm's address for correspondence regarding this project, including phone numbers (mention city code), fax numbers and email addresses
4. Details of the authorized signatory of the consulting firm for communication regarding this project
 - b. Name
 - c. Designation
 - d. Contact details of the authorized signatory
 - e. Office phone (direct line/ extension) number
 - f. Fax number
 - g. Mobile phone number
 - h. Email id
5. Total-experience since the inception of the firm (in years)

Scoring Rubric/ Guide

S.No	Description	Marks
1.	Consultant's Organization and Experience	25
2.	Description of the Work Plan for Performing the Assignment	25
3.	Work Schedule for Deliverables	25
4.	Qualification, Experience, and attached Curriculum Vitae (team/ individual involved in this project)	25

1. Consultant's Organization and Experience

A brief description of the consultant's organization and an outline of the recent experience of the consultant that is most relevant to the assignment.

A - Consultant's Organization

Provide here a brief description of the background and organization of your company

B - Consultant's Experience

- List only previous similar assignments (mobile app) successfully completed or awarded in the last 03 years.
- Please list a maximum of 3 such assignments.

2. Description of Work Plan in Responding to the Terms of Reference

A description of the work plan for performing the assignment, including a detailed description of the proposed platform to be used for developing each interface.

3. Work Schedule for Deliverables

The schedule of the activity with detail timeline of the deliverables

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4. **Qualification, Experience, and Attached Curriculum Vitae**

A brief description of the individual/ team members' experience, qualification most relevant to this assignment.

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