

प्रौद्योगिकीस्थानांतरणकेलिएपसंदकीअभिव्यक्ति  
**EXPRESSION OF INTEREST FOR RESELLING OF  
SOFTWARE PRODUCTS**

“वनएम2एम एप्लीकेशन आधारित सॉफ्टवेयर फ्रेमवर्क - सामान्य स्मार्ट आयवोटी  
कनेक्टिव (कॉस्मिक)”

**Fleet Management System for live tracking and Flexible  
Operations (FlexiFleet),  
Personalized Transit Route Guidance System (PTRGS) &  
Operational Strategies for Headway Reliability (OSHR)**



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Issued by

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## 1. Introduction

The Centre for Development of Advanced Computing (C-DAC) is seeking "Expression of Interest" (EOI) from Indian companies who are interested in reselling the "**Fleet management system for live tracking and Flexible operations (FlexiFleet), Personalized Transit Route Guidance System (PTRGS), and Operational Strategies for Headway Reliability (OSHR)**" designed and developed by CDAC with the support of Ministry of Electronics & IT (MeitY). This Reseller partnership is available on non-exclusive basis, allowing companies to acquire licenses to market, sell, implement and support the product on both perpetual and SaaS models.

CDAC is inviting interested companies to respond with their company details, collaboration details, sales projections, and financial details to C-DAC. The rates for the reseller registration fee to become a Reseller Partner, software product fee, and license subscription fee have been approved by the Competent Authority of C-DAC after evaluating the development cost of the products.

Expressions of Interest (EOI) are being solicited on behalf of M/s Technology Promotion Centre (TPC), C-DAC, Thiruvananthapuram, from reputable firms/companies registered in India. These firms/companies should possess relevant experience and insights in marketing, implementation, or similar products through reselling. C-DAC has designed and developed **Fleet Management System for live tracking and flexible operations (FlexiFleet), Personalized Transit Route Guidance System (PTRGS), and Operational Strategies for Headway Reliability (OSHR)**. These solutions are now available for reselling, enabling the industry to effectively market and implement them for various client projects.

This document provides comprehensive information regarding the products, different deployment models of products, terms and conditions for companies to submit their Expression of Interest and establish a Reseller Partnership with CDAC, in accordance with the terms outlined herein. Any further technical details / inputs required for the marketing & sale of products can be had directly from CDAC.

## 2. Brief about C-DAC

Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY), Govt. of India for carrying out R&D in IT, Electronics and associated areas. It is a national Centre of Excellence, pioneering application oriented research, design and development in Electronics and Information Technology.

The Centre has contributed significantly to the growth of the industry in general and the electronics sector in particular through the indigenous development of commercially viable systems and products, foreign technology absorption, adaptation and upgrades, consultancy and training and turnkey implementation of contract projects. The Centre has several firsts to its credits and is the recipient of prestigious national level awards for excellence in application- oriented R & D.

The different technology verticals of C-DAC include High Performance Computing (HPC), Quantum Computing, Artificial Intelligence (AI), Strategic Technologies, Digital India RISC-V (DIR-V), Software Technologies, e-Governance, Healthcare & Educational



Technologies, Cyber Security, Automotive and Communication Technology, Power Electronics & Renewable Energy, Intelligent Transportation Systems (ITS) and others.

### 3. Brief description about the Products

**FlexiFleet** - Fleet Management System for Live Tracking and Flexible Operations, offers comprehensive features to effectively manage and streamline fleet operations and vehicle tracking. The current software encompasses features such as VLTD (Vehicle Location Tracking Device), device tagging and management, real-time monitoring of fleet location, alerts for various conditions including Sops, over speed, geofence, ignition, idle, halt, rash driving, etc. It also provides notifications through SMS, email, or push notifications, route planning and optimization, scheduling, crew management, trip management, alert management, expense tracking, and driver score reports. Additionally, it offers a decision summary dashboard and analysis based on trips, alerts, route schedules, deviations, and expenses.

**PTRGS** - Personalized Transit Route Guidance System (PTRGS) is a mobile application that provides passengers with optimal or customized routes based on real-time information about location of buses and passenger demand. Using this app, Passengers can find bus stop, bus arrival time, and bus route information. The routes can be selected based on minimum travel time, cost, crowding, or maximum reliability. Besides users can specify the preferred service type, number of transfers or current vs future departure times. The main modules of PTRGS are,

- **Bus Stop Search** module contains search nearest stops, find the directions to reach the nearest stop and to explore next buses from the stops.
- **Bus Schedule Search** module contains provision to find the current location and expected arrival time of buses.
- **Route Planner** functionality helps to find the quickest route, cheapest route and personalized route (reliability, crowding, walking time, service type) to reach the destination points.

**OSHR**-Operational Strategies for Headway Reliability is a real-time scheduling tool to improve transit reliability by reducing the number of bus bunching instances. This tool is an Android mobile application which uses GPS data of all the buses on a route and historic data to determine how long buses should be made to wait at control points (which are typically the start and end points on a route). These calculations are based on the predicted travel times between different stops on a route for different times of the day.

The main modules of OSHR are,

- **Web Dashboard** consists of features such as real time location of different public transport Buses on each route, Bus bunching instances, Average headway graph and space time plot of buses running in that route. And also provides interfaces to enable and disable OSHR algorithms, QR CODE based scanning of Vehicle number and Control Stop configuration.
- **Driver console mobile app**, which will be installed on each buses, provides notification about bus bunching and hold time is displayed in the app using a countdown timer. Real Time Location tracking of Buses using mobile GPS is an important feature of Driver console app. The app also captures the



violation/compliance information whether the buses violate or not such as Late start /Early start the given hold time as part of holding strategy.

Both PTRGS and OSHR require a backend system (FlexiFleet Advanced version) for data collection and management, algorithm execution, and sending results to mobile app APIs. The implementation of PTRGS and OSHR requires following data from the transit agencies.

#### **Static Data (Master Data)**

- Bus information includes bus number, bus type, unique id for bus, mapping of GPS device information etc.
- Bus stop details
- Route Details
- Bus schedules and trip details
- Crew Details
- ETM details

#### **Dynamic Data (Live Data)**

- Live GPS data feed of all buses
- Details of mapping of VLT (Vehicle Location & Tracking) device & bus no. On daily or real-time basis using waybill or other such databases.
- Detail of mapping of ETM devices, bus no and route
- Daily or hourly ticketing data as available

Customization & Data cleaning will be required for the implementation of PTRGS and OSHR to accommodate the varying data structures of transit agencies. CDAC shall support the Reseller partner in the customization and data cleaning activities at additional cost mutually agreeable between the parties. The additional cost for such activities shall be budgeted by the Reseller partner in their proposal to the client.

Please refer product brochures (refer Annexure II)

## **4. Field demonstrations**

FlexiFleet is implemented in Supply-Co, Kerala State Civil Supplies Corporation, Govt of Kerala, to track and monitor their truck vehicles that transport food grains between FCI godowns, Distribution centres and ration shops. The software offers various features such as real-time monitoring of vehicles, vehicle tagging and allotment, route creation, trip scheduling, dispatching of food materials, tracking vehicle departures and arrivals, generating trip reports, and more. The use of Google Map APIs enables the real-time visualization of vehicle positions on a map, as well as the calculation of distances and estimated arrival times and route management. The software supports any MAP APIs. The project has been successfully commissioned and one year warranty is also completed. The technology readiness level (TRL) of Flexi Fleet stands at 9.



The prototype of PTRGS were tested using the live GPS data received from Metropolitan Transport Corporation (MTC), Chennai for selected three routes (5E Besant Nagar to Vadapalani, 19- Thiruporur to T Nagar, and 70G-Vadapalani to Guduvanchery). Real-time testing of crowding levels in buses and route reliability using the PTRGS app could not be tested because unavailability of ETM data at MTC. The PTRGS delivered satisfactory results for the three selected routes. The PTRGS was tested in a control environment and with open-source map APIs. The technology readiness level (TRL) of PTRGS stands at 6. CDAC shall support the Reseller partner to enhance the product to TRL8/9 for commercial deployment. However, the required transit agency data shall be made available to CDAC by the Reseller partner.

The OSHR prototype was tested in BMTC bus route 276 in the up and down directions, from Tata Institute to Vidyaranyapura and from Vidyaranyapura to Malleswaram 18th Cross, respectively. Two Control points in both directions identified were Devasandra Chikkamaranahalli and BEL Circle. OSHR mobile application with three passenger travels along the 276 route to collect real time data from fields and simulate bus bunching.

The backend system communicates the holding time calculated by the OSHR application to the mobile app to hold vehicle at the control point as soon as the vehicle gets close to it. The passengers stayed at the control point until the hold time, which was determined by applying the OSHR application, and then the journey was resumed. The hold time was applied to three devices, and it was shown that there was adequate time between trips and no bunching was found. The OSHR app was tested by using open source map APIs and in a control environment and the results were satisfactory. The OSHR currently holds a technology readiness level (TRL) of 6. CDAC shall support the Reseller partner to enhance the product to TRL8/9 for commercial deployment. However, the required transit agency data shall be made available to CDAC by the Reseller partner.

## 5. Invitation for Expression of Interest

- 5.1. C-DAC invites “Expression of Interest” (EOI) in the format given in Annexure-I. Companies can become Reseller partner of C-DAC based on the information furnished in Annexure – I, subject to the assessment by the C-DAC.
- 5.2. Expression of Interest (EOI) sought from interested industry vendors for marketing the technology/products of Fleet Management System (FlexiFleet), Personalized Transit Route Guidance System (PTRGS) and Operational Strategies for Headway Reliability (OSHR) developed by CDAC through the Reseller Partners.
- 5.3. The cost for the Fleet Management System (FlexiFleet), Personalized Transit Route Guidance System (PTRGS) and Operational Strategies for Headway Reliability (OSHR) product has been finalised by the Competent Authority of C-DAC.
- 5.4. This invitation of EOI will be kept open till 30/10/2024. No companies can apply for this EOI after the EOI closure date. However, C-DAC reserves the right to extend the date at the same/ revised terms and conditions after the due date.
- 5.5. Interested companies may submit the expression of interest as per the guidelines stated in this EOI (see section 8.0 and section 9.0)
- 5.6. The companies must have a clear understanding of the terms and conditions stated in the EOI. They should then submit the EOI, duly signed. CDAC shall assess the information provided by the companies and will intimate the company if they qualify to become reseller partner within 14 days of sending the application. The company



- shall then pay the reseller registration fee to CDAC in order to become a reseller partner of CDAC.
- 5.7. Participating in this Expression of Interest (EOI) does not ensure any affiliation with C-DAC, unless the company is empanelled as a Reseller partner of CDAC.
  - 5.8. The technology/product is offered on non-exclusive basis.
  - 5.9. The submission of the EOI shall include all such documents that are specified herein to prove the authenticity of their offer and any claim made therein. All cost and expenses associated with submission of EOI shall be borne by the company while submitting the EOI and C-DAC shall have no liability, in any manner in this regard, or if it decides to terminate the process of short listing for any reason whatsoever.
  - 5.10. C-DAC reserves the right of rejecting any offer without assigning reasons.
  - 5.11. There is neither a business guarantee nor any commitment for funding support from C-DAC to the selected Reseller Partner.

## 6. Who can apply

Any Indian Company including MSMEs or Start Ups willing to acquire technology/product for the marketing, sale and implementation of Fleet Management System for Live Tracking and Flexible Operations (FlexiFleet), Personalized Transit Route Guidance System (PTRGS) and Operational Strategies for Headway Reliability (OSHR) can apply for the Reseller Partner.

## 7. How to Apply

Interested companies may send expression of interest by filling the template as per Annexure – 1 along with supporting documents to

**Head, Technology Promotion Centre**

Centre for Development of Advanced Computing (CDAC)

Vellayambalam, Thiruvananthapuram, Kerala, India, 695033

Phone: 0471 2727508 Fax: 0471 2723456

Email: [tpc@cdac.in](mailto:tpc@cdac.in) Website: [www.cdac.in](http://www.cdac.in)

## 8. Selection of Reseller Partner

- 8.1. The Reseller Partner is selected based on the response to expression of interest submitted by interested companies and evaluated as per clause 5.6 above.
- 8.2. If selected, the company shall pay reseller registration fee in part or lumpsum (as per payment milestone mentioned in clause 13.4) to become Reseller partner of C-DAC.
- 8.3. C-DAC shall issue a reseller partner certificate on receiving the reseller registration fee as stipulated in the payment terms.
- 8.4. The Reseller partnership license shall be perpetual for a limited period of 3 years and will be granted on Non-Exclusive basis.
- 8.5. The Reseller partnership license can be extended beyond 3 years for a period of another 2 years at the terms and conditions relevant at that time.
- 8.6. Only if a Reseller partner has a valid partnership license, he is allowed to quote for CDAC products for various business opportunities
- 8.7. The reseller registration fee is non-refundable.



- 8.8. The Reseller Partnership is liable to get terminated if the Reseller Partner fails to resell the software products within a period of 12 months from the effective date of signing the EOI. If the Reseller Partner is unable to resell within 12 months due to unavoidable circumstances and causes beyond his control, the Reseller Partner shall make a request in writing for extension of the time limit with detailed reasons. This request will be carefully examined and considered by C-DAC. The decision of C-DAC in this regard shall be final and binding on the Reseller Partner.
- 8.9. Right of the IPR generated by C-DAC on the applications used with the products shall remain with C-DAC.
- 8.10. The Reseller Partner shall employ his best endeavor to commercialize the said technology/product on a commercial scale within India and abroad at prices to be fixed by him.
- 8.11. The Reseller Partner is required to provide progress reports on their reselling activities to C-DAC every six months, specifically regarding the number of software sold.
- 8.12. The Reseller Partner must obtain written permission from C-DAC before introducing any necessary modifications or improvements during the reselling process covered by this agreement. These modifications and improvements will then become an integral part of the software.
- 8.13. The Reseller Partner shall notify to C-DAC the change, if any, in its Registered Office within 15 days of such changes and shall also notify the changes in agreement within the aforesaid stipulated period.
- 8.14. The Reseller Partner shall not on its own name or in the name of any third party, file any patent / copyright Application for the grant of patent/ copyright of the said technology/products hereby licensed and shall also not oppose at any time any patent application made by C-DAC.

## **9. Reselling license, Validity & Renewal**

- 9.1. The company (MSME/Start-ups/others) must pay a reseller registration fee of Rs 25000.00, plus applicable taxes, submit copy of Company Profile, Technical Collaborations, Locations of offices, Strength of company – Marketing & Technical (for Pre sales & Post sales support) etc to qualify and become a Reseller partner.
- 9.2. As a Reseller partner, the company shall have the authority to market and implement the technology/products mentioned in the EOI for a period of three (3) years, starting from the date of signing the EOI.
- 9.3. On successful Payment of Reseller Registration fee grants the partner validity for a period of 3 years from the date of signing of the EOI.
- 9.4. After three years a new reseller partnership is to be taken by the company based on the EOI conditions prevailing at that time.
- 9.5. The partner should have a valid Reseller Partnership for providing any technical support on the reselling deliverables made by C-DAC.
- 9.6. Any customisation requirements of the Reseller Partner shall be entertained by C-DAC only if a valid reseller partnership exists. Such customisations shall be undertaken by C-DAC at cost basis on mutually agreed terms and conditions in contract mode.





## 10. Deliverables

- 10.1. On payment of Reseller Registration Fee and become the reseller partnership with CDAC, the following list of deliverables shall be provided by C-DAC to the Reseller Partner for product marketing support of Fleet Management System for Live Tracking and Flexible Operations (FlexiFleet), Personalized Transit Route Guidance System (PTRGS) and Operational Strategies for Headway Reliability (OSHR).
  1. Reseller Partnership certificate
  2. Brochure softcopy
  3. Technical Manual-(Hardware and Software Specification to run the applications)
  4. User Manual
  5. Product Training
- 10.2. FlexiFleet trial service offered in SaaS model by CDAC for demo purpose shall have maximum of 15 vehicle license valid for a period of 1 month. This service is accessible to companies that possess a valid Reseller partnership with CDAC.

## 11. Training for Reseller Partners

- 11.1. Upon 100% payment of reseller registration fee (and 40% in case of startup companies), training for product marketing, software installation, configuration and administration shall be provided up to two working days.
- 11.2. The training shall be conducted at C-DAC (T) premises.
- 11.3. The travel boarding and lodging expenses of the trainee(s) during the period of training shall be borne by the Reseller Partner.
- 11.4. For training requested outside C-DAC (T) premises air travel, boarding and lodging charges of C-DAC (T) officials shall be borne by the Reselling Partner. C-DAC shall also charge manpower per day as per C-DAC rules prevailing at the time of training for any outstation training requested by the Reseller partner. Nomination of the C-DAC trainers and period of stay for outstation training will be decided by C-DAC on mutual consultation, depending on the type of training requested.
- 11.5. Additional training may also be given by C-DAC either at the premises of C-DAC (T) or at the location identified by the Reseller Partner on payment basis at mutually agreed terms and conditions.

## 12. Technical support

- 12.1. During the license period, C-DAC shall offer remote assistance to the Reselling Partner for the implementation process. This installation support will be provided to the Reseller Partner up to a maximum of two sites.
- 12.2. If any onsite support is requested by the Reseller Partner, C-DAC shall support on mutually agreed terms and conditions.
- 12.3. For onsite support outside C-DAC premises travel, boarding and lodging charges of C-DAC officials shall be borne by the Reseller Partner. C-DAC shall also charge manpower per day as per C-DAC rules prevailing at the time of support request for outstation support. Size of the C-DAC team and period of stay for outstation



support shall be decided by C-DAC on mutual consultation, depending on the type of support requested

### 13. Cost for Registration of Reseller

- 13.1. The products shall be commercialized through Reseller Partners by paying a reseller registration fee for obtaining the Reseller Partnership certificate and then subscribing the deployment license from CDAC during the period of validity of the partnership.
- 13.2. The cost for FlexiFleet, PTRGS, and OSHR, along with the cost for vehicle license, trip license, and route licenses can be had from CDAC on submitting the response to the EOI.
- 13.3. The Reseller Partnership with CDAC requires reseller partners to pay a reseller registration fee plus applicable taxes, for the marketing and implementation of FlexiFleet, PTRGS, and OSHR software. Only reseller partners who have a valid partnership with CDAC are eligible to subscribe to the software product license for FlexiFleet, PTRGS, and OSHR.
- 13.4. Any MSME/Startup that expresses interest in sales and marketing, installation, and O&M support for transit agencies, logistics, etc., has the opportunity to become a Reseller Partner of CDAC for FlexiFleet. By paying a fixed Reseller Registration Fee of Rs. 25000.00, companies can join as Reseller partners. The payment terms for this fee can be found in Table [1].

*Table 1: The Reseller Registration Fee and Payment term of Reseller Partner*

Category	Reseller Registration Fee (in Rs.)	Payment Terms
<b>MSME and Other Companies</b>	<b>25,000</b>	<ul style="list-style-type: none"><li>• To be paid at the time of signing of Reseller Partnership agreement with CDAC.</li></ul>
<b>Startups</b>	<b>25,000</b>	<ul style="list-style-type: none"><li>• 40% fee shall be paid as first instalment at the time of signing of Reseller Partnership agreement with CDAC.</li><li>• Balance 60% fee shall be paid on receipt of first implementation order from client or within one year of signing of agreement, whichever is earlier.</li></ul>

- 13.5. The selected companies interested in purchasing and marketing CDAC products shall be provided with the detailed cost and license pack of the products.



**For any queries please contact:**

Section Head (Technology Promotion Centre)

Vellayambalam, C-DAC, Thiruvananthapuram

Contact: 0471 2723333 (extn: 249), 9847069184

email: [tpc@cdac.in](mailto:tpc@cdac.in)



## Annexure –I

### Details of the Reseller Partner

A	COMPANY PROFILE
1.	Name of the Organization & Website details:
2.	Name of the Contact Person: Address: Mobile: Landline: Fax: E-Mail:
3.	Year of Incorporation:
4.	Type of Organization a. Public Sector/ Limited/Private Limited/Partnership/ Proprietary/ Society/Any other b. Whether 'Foreign Equity Participation (Please give name of foreign equity participant and percentage thereof) c. Names of Directors of the Board/ Proprietors d. Name and address of NRI(s), if any
5.	Category of the firm: Large/Medium/Small scale unit /others
6.	Address of the Registered Office: (Include Certificate of Registration)
7.	The organization must be a reputed firm/company/SME/startup/R&D company incorporated in India.
8.	The turnover is to be supported by financial statements of accounts/ Annual reports duly certified by a Chartered accountant/ Balance sheets of last 3 years/ Income tax returns for the last 3 years period.
9.	Number of Offices with addresses (Excluding Registered Office): India, Abroad: .....
10.	Certificate of registration
11.	Permanent Account Number
12.	GST Reg. No.
13.	ISO or any equivalent Certification
B.	OTHER REQUIREMENTS
14.	The total manpower strength at various levels to be furnished
15.	The in-house technological expertise available to be furnished, if available
16.	List of products/technologies worked with as regular activity in last three years. Give the list of products/technologies with general specifications and the customers.
17.	List of PSUs/Govt. customers



18.	The details of sales and marketing to be furnished
19.	The Reseller Partner shall provide details of the sub-vendors in case they propose to employ for Part-work.
<b>C.</b>	<b>Expression of Interest: Spell out the extent of interest and envisaged market potential</b>

I affirm that the information provided above is accurate to the best of my understanding. I confirm that we have fully understood the terms and conditions, as well as the costs of the products. As a Reseller Partner of CDAC, we are committed to actively promoting and implementing these products.

Signature with Name & Seal:

Place:

Date:

## Annexure II: Different versions of FlexiFleet

Features	Lite	Standard	Advanced
1. Live Tracking	✓	✓	✓
2. Cluster View in Map	✓	✓	✓
3. Alert Management	✓	✓	✓
4. Alert Notifications (Email)	✓	✓	✓
5. Alert Notifications (SMS, App)	✗	✓	✓
6. Route Design	✗	✗	✓
7. Trip Dispatch	✗	✗	✓
8. Route Deviation Alert	✗	✓	✓
9. Route playback	✓	✓	✓
10. Crew Management	✗	✗	✓
11. Expense Management	✓	✓	✓
12. Document Expiry Notifications	✓	✓	✓
13. User & Role Management	✓	✓	✓
14. Report scheduling	✗	✗	✓
15. Dashboards & Analysis			
a. Driver score Analysis	✗	✗	✓
b. Vehicle Expense Analysis	✓	✓	✓
c. Alert Analysis	✗	✓	✓
d. Trip Analysis	✗	✗	✓
16. Reports			
a. Expense Report	✓	✓	✓
b. Alert Reports	✓	✓	✓
c. Alert Reports with map	✓	✓	✓
d. Route report	✗	✗	✓
e. Idle in trip report	✗	✗	✓
f. Route deviation report	✗	✗	✓
g. Trip schedule reports with map	✗	✗	✓