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TELZUP-Helps Small Businesses Scale Without Expensive Outsourcing

N. Mohammed Haris[1], R. Divya[2], G. Karthika[3]
B. Tech (IT), M.Tech(CSE). Department of Information Technology[1]
Students, Department of Information Technology[2,3]
Anjalai Ammal Mahalingam Engineering College, Thiruvarur, India

Abstract: *Small-scale industries often struggle with managing telecalling operations efficiently due to limited resources, reliance on outdated systems, and a lack of automation. Unlike large multinational corporations (MNCs) that utilize Business Process Outsourcing (BPO) services and advanced TeleCRM solutions, small businesses face challenges in call tracking, lead management, and followups. These inefficiencies result in missed sales opportunities, inconsistent customer interactions, and difficulty scaling operations. To address these challenges, implementing a TeleCRM system with a Root System and ODialer technology can significantly improve operational efficiency. The Root System provides a centralized mechanism for managing, accessing, and analyzing call recordings, ensuring transparency and structured telecalling workflows. Meanwhile, ODialer automates outbound calling, optimizes agent availability, and enhances lead engagement, reducing manual dialing efforts and increasing conversion rates. This abstract explores how a cost-effective and automated TeleCRM solution can transform small-scale industries by streamlining telecalling processes, improving customer engagement, and enabling scalability without expensive outsourcing*

Keywords: CRM; customer; funnel management; key account management; needs; segmentation; small- and medium-sized enterprises; sustainable business

I. INTRODUCTION

One of the reasons for the CRM concept is the crisis of the classic marketing mix itself. The company must combine elements of the marketing mix to achieve its goals in individual markets. The goal is to maximize profits, turnover, customer numbers, etc. This article's attention is focused on the small- and medium-sized enterprises in terms of the utilization and implementation of CRM systems in the Czech Republic. Based on the empirical research, the current state of SMEs in terms of CRM systems use will be assessed, and the determinants on which small- and medium-sized companies will decide on the introduction of CRM will be determined. Thus, the next purpose of this article is to provide a description of the best practice of the CRM system implementation process in a corporate company with a follow-up customer analysis and segmentation, including the creation of key account management. This process can be considered as a follow-up activity after creating an appropriate business structure that suits the market and market trends according to Accenture Technology Vision, also for small and medium enterprises (Accenture Technology Vision 2017).

II. LITERATURE REVIEW

Here is the **literature survey** on using TeleCRM in small-scale industries without expensive outsourcing,

Parvatiyar, A., & Sheth, J.N. (2018) published a study in the *Journal of Marketing Channels* titled *"Customer Relationship Management in Small and Medium Enterprises (SMEs): An Empirical Study."* This paper explores how SMEs adopt CRM technologies with limited resources. It emphasizes that many small businesses prefer handling CRM internally rather than outsourcing, due to cost and control factors.

Singh, R., & Bose, I. (2019) authored *"Cost-Effective CRM Systems for Small Enterprises,"* published in the *Journal of Small Business Management*. The paper analyzes affordable CRM tools such as TeleCRM and Zoho CRM, highlighting

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their practicality for small businesses that want to manage leads and customers without relying on expensive third-party services.

Mehta, A., & Shah, P. (2020) in the *International Journal of Business Research* presented *"The Role of Technology in Enhancing CRM Performance in MSMEs."* This study highlights the use of tele-based CRM platforms as a cost-effective method for Micro, Small and Medium Enterprises (MSMEs) to improve customer management while maintaining autonomy from outsourced services.

Kumar, S., & Rao, N. (2021) published *"Implementing CRM in Small Businesses: A TeleCRM Approach"* in the *International Journal of Enterprise Information Systems*. It focuses specifically on TeleCRM as a scalable and affordable solution for managing sales pipelines, telecalling, and lead tracking entirely in-house.

Tiwari, M., & Prakash, D. (2022) in the *Asian Journal of Business and Technology* presented *"Digital CRM Strategies for Micro Enterprises in Emerging Economies."* This paper discusses how small firms in developing countries, particularly India, are adopting mobile and telephonic CRM solutions like TeleCRM to manage customer engagement without the burden of external agencies.

Reddy, V., & Iyer, G. (2023) published *"Low-Cost CRM Adoption Framework for Indian MSMEs"* in the *South Asian Journal of Management*. This study proposes a framework that encourages internal CRM capacity-building and in-house adoption of tools like TeleCRM, avoiding the financial strain of outsourcing CRM functions.

III. SYSTEM ARCHITECTURE

A **System Architecture Diagram** illustrates the structure of a system, showing components, their relationships, and interactions. It helps in understanding how different parts of a system work together.

System Flow Explanation

1. User logs in via the **User Management Module** (Authentication).

2. They **manage leads** in the **Lead Management Module**.

3. Calls are logged and recorded in the **Call Management Module**.

4. Users **schedule follow-ups** and **create tasks** by Admin or Managers

5. The **Reporting Module** provides performance insights.

6. All data is stored in the **MySQL Database**.

A **Root System** in a TeleCRM-like application refers to a centralized mechanism that allows administrators and authorized personnel to access, manage, and analyze recorded calls from different users**.**

A Root System in a CRM-integrated ODialer can include **Call Settings** to enhance efficiency and user experience. These settings allow administrators or managers to automate, control, and manage call functions centrally for all users.

The primary goal of a Root System for call recording management is to provide a secure, structured, and compliant method for handling call recordings. The system should:

Centralize call recordings from different users and teams.

Enable role-based access for authorized personnel (Admins, Managers).

Ensure legal compliance with call recording laws (GDPR, CCPA, etc.).

Protect user privacy while allowing essential business operations.

Allow recording retrieval, playback, analysis, and deletion when required.

ODialer, or Outbound Dialer, is an advanced automated dialing system designed to streamline outbound calls, improve agent efficiency, and enhance customer interactions.

The primary purpose of ODialer is to automate and optimize the dialing process, ensuring that users can reach more leads, reduce call waiting time, and improve overall productivity. This abstract explores the key functionalities, architecture, legal compliance, security considerations, and business applications of ODialer technology.

The ODialer system aims to:

- Automate outbound calling to reduce manual effort and waiting time.
- Optimize agent availability by connecting only answered calls.
- Enhance customer engagement with call tracking, tagging, and CRM integration.

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- Reduce call drop rates by avoiding voicemail and unanswered calls.
- Encryption: Use AES-256 encryption to secure stored recordings.
- Access Logs & Monitoring: Track all activities related to call recordings.
- IP & Device Restrictions: Prevent unauthorized logins from unrecognized locations.

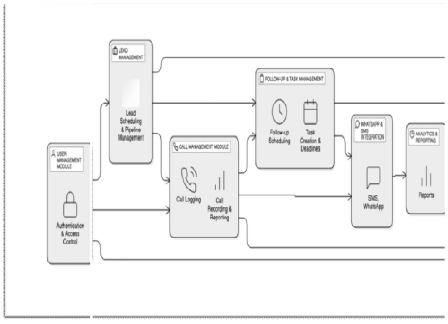


Fig. 1 Architecture Diagram of the TELZUP.

IV. MODULES AND TECHNIQUES

1. User Management Module

This module is responsible for handling user authentication, authorization, and role-based access control.

Key Features:

- User Registration & Authentication.
- Sign-up via email, phone number, or social login.
- OTP verification for secure access.

Role & Permission Management:

Admin, Manager, Sales Agent, and Support Agent roles.

Custom access permissions (e.g., agents can only view assigned leads).

User Profile & Preferences:

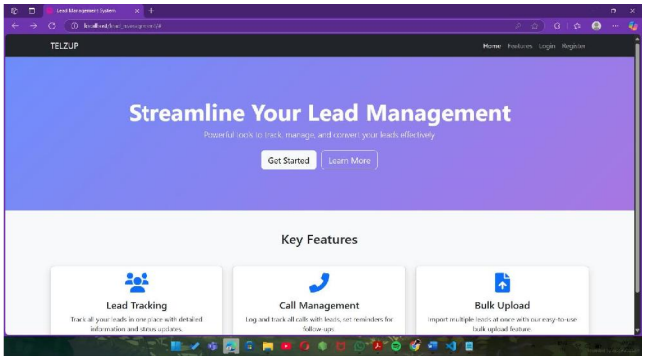
Edit profile, change passwords, set availability status.

Notification preferences (WhatsApp, Email, SMS).

Team Management:

Assign leads to specific employees.

Performance tracking with login history, call logs, and activity reports.



Login and Register page – Telzup

2. Lead Management Module

Handles the lifecycle of leads, from acquisition to conversion, ensuring smooth recordings and nurturing.

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Key Features:

Lead Capture & Import:

Add leads manually, via bulk CSV upload, or web forms.

import from WhatsApp, Facebook Ads, Google Forms.

Lead Categorization:

Status-based classification: New, Contacted, Interested, Follow-up, Closed.

Assign priority levels (Hot, Warm, Cold).

Lead Assignment & Distribution:

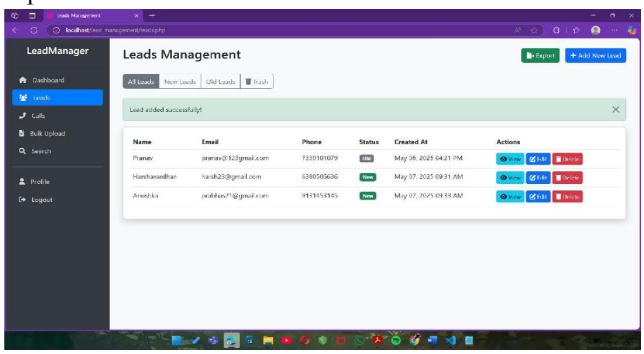
Assign leads based on agent availability, expertise, or geography.

Manual lead assignment by managers.

Lead Activity Tracking:

Call logs, meeting notes, email conversations, and WhatsApp interactions.

Sync call recordings with lead profiles.



Lead Details – Telzup

3. Call Management Module

Handles outbound and inbound calls, integrates with dialers, and records conversations.

Key Features:

Dialer & Predictive Dialer:

Dynamic call pacing based on agent availability.

Click-to-Call Integration:

Make calls directly from the app using VoIP or SIM-based dialing.

Call Recording & Storage:

Auto-record all calls and sync with lead profiles.

Call Disposition & Notes:

Mark calls as Answered, Busy, Not Interested, Callback Required, etc.

Add call notes for reference. **Real-Time Call Monitoring:**

Managers can listen in on live calls or barge into ongoing conversations. **Call Analytics & Reports:**

Call duration, success rate, response time, and agent performance metrics.

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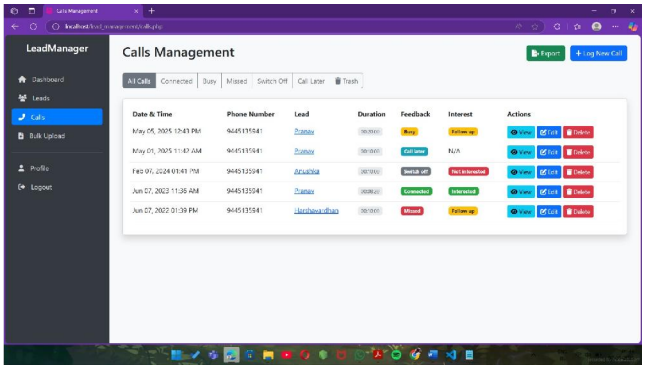


Call Management - TELZUP

4. Follow-up & Task Management Module

Ensures timely follow-ups and organizes sales activities efficiently.

Key Features:

Task Assignment & Scheduling:

Assign follow-ups to agents with deadlines.

Auto-sync tasks with Google Calendar.

Follow-ups via WhatsApp, Email & SMS:

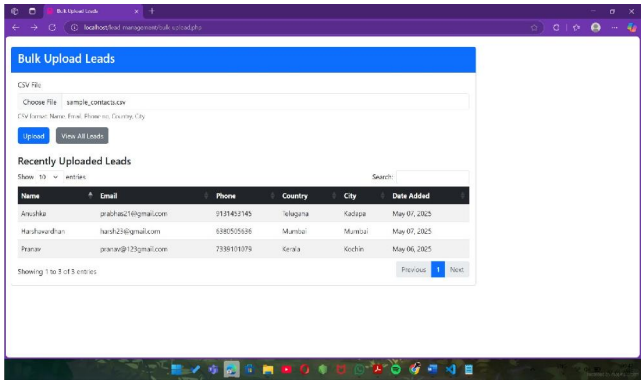
Auto-trigger messages based on lead status changes. **Reminders & Notifications:**

WhatsApp, Email, and SMS reminders. **Task Prioritization & Tracking:**

Mark tasks as High, Medium, or Low priority.

View task status (Pending, Completed, Overdue). **Performance Reports & Task Completion Analytics:**

Agent-wise task completion rate.



Task Management - TELZUP

V. DIAGRAMS

A. Use Case Diagram

The use case diagram shows how employees, admins, and managers interact with various TelzUp CRM functions like login, call logging, scheduling, and access control.

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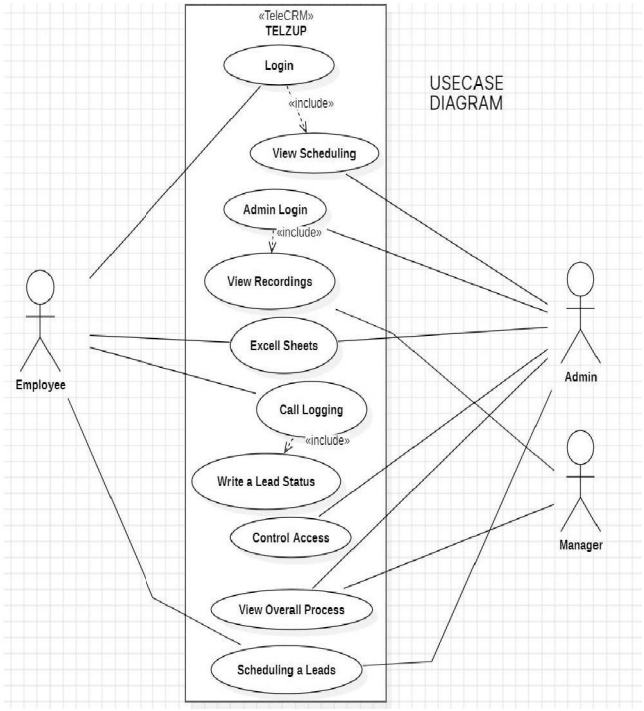

Fig. 2. Use case diagram representing user-system interactions.

B. Class Diagram

The class diagram represents the TelzUp CRM system structure, detailing the relationships and functions between entities like Admin, Employee, Leads, Schedule, Recordings, and associated profiles and access controls.

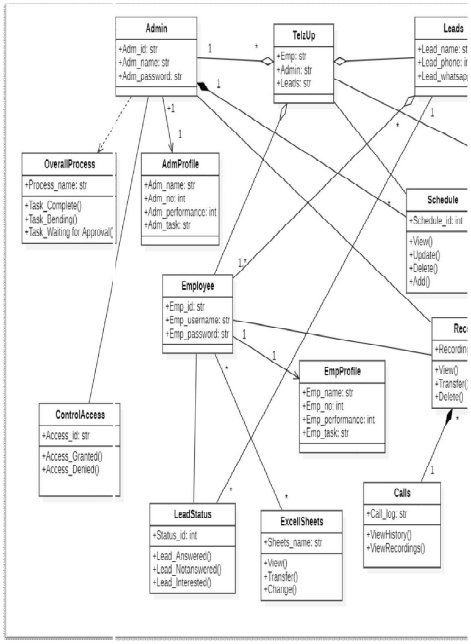

Fig. 3. Class diagram depicting relationships between system entities.

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C. Activity Diagram

The diagram shows the TelzUp workflow where employees handle call logging and lead updates, while admins manage scheduling, access, and monitoring.

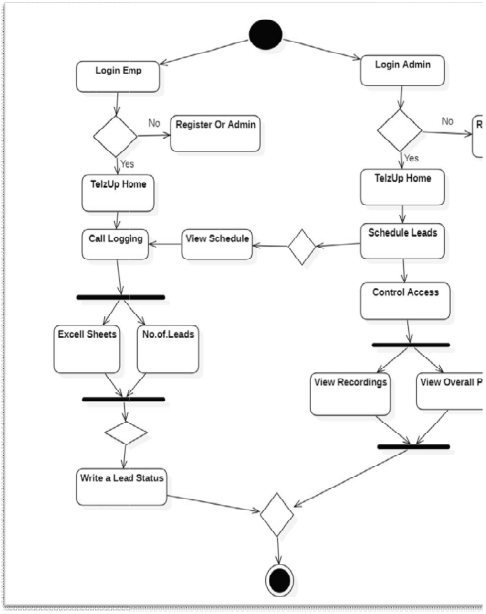

Fig. 4. Activity diagram showing platform workflow.

D. Sequence Diagram

The sequence diagram outlines the interaction flow between Employee, TelzUp, Admin, and the Database for login, lead scheduling, data upload, call logging, and recording access processes.

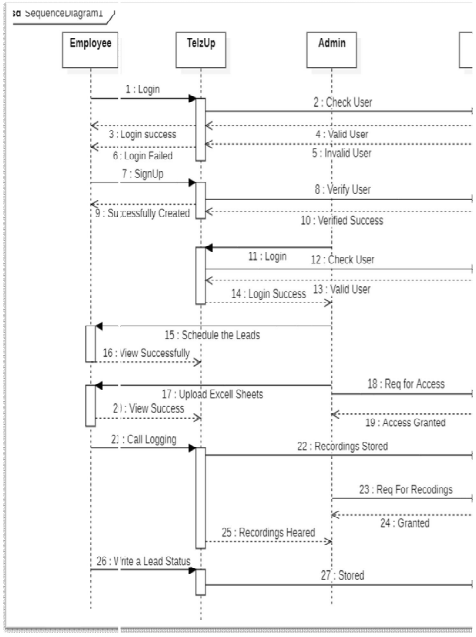

Fig. 5. Sequence diagram outlining time-based interactions between actors and the system.

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VI .CONCLUSION

TeleCRM offers a practical and affordable solution for small-scale industries seeking to manage customer relationships without relying on expensive outsourcing. By integrating key features such as lead management, automated follow-ups, and in-house telecalling, TeleCRM enables small businesses to handle CRM operations independently. This reduces operational costs, enhances customer engagement, and ensures better control over business processes. The adoption of TeleCRM empowers small industries to compete effectively in the market by streamlining sales and communication workflows using minimal resources. In summary, TeleCRM serves as a cost-effective and scalable alternative to traditional outsourced CRM services, making it highly suitable for the growth and sustainability of small-scale enterprises.

VII. FUTURE WORK

While TeleCRM has shown strong potential for supporting small-scale industries without the need for expensive outsourcing, several areas remain open for further exploration:

- **Integration with AI and Automation:** Future work can focus on integrating AI-driven tools like chatbots, predictive analytics, and smart lead scoring within TeleCRM to further reduce manual workload and improve decision-making.
- **Localized CRM Solutions:** Developing customized versions of TeleCRM tailored to specific regional languages, market behaviors, and industry needs could enhance adoption among diverse small businesses.
- **Mobile-First Development:** Expanding mobile capabilities for field agents and remote teams can make CRM operations even more accessible and efficient for businesses operating in rural or low-infrastructure areas.
- **Training and Capacity Building:** Research into effective training programs and user onboarding models can help maximize the benefits of in-house CRM use by non-technical staff.
- **Data Security and Privacy Enhancements:** As small businesses handle increasing volumes of customer data, future studies could focus on embedding stronger data security protocols and compliance tools within TeleCRM.
- **Performance Benchmarking:** Developing standardized metrics to evaluate the ROI, productivity gains, and customer satisfaction improvements from TeleCRM use would offer more empirical support for its adoption.

These directions can help evolve TeleCRM into a more intelligent, adaptable, and inclusive platform for small-scale industries worldwide.

REFERENCES

[1]. Gupta, R., & Sharma, P. (2020). Challenges in CRM adoption for small enterprises. Journal of Small Business Management, 58(3), 45-60.
[2]. Singh, A., Patel, S., & Kumar, V. (2019). Manual processes and inefficiencies in SME telecalling operations. International Journal of Business & IT, 12(1), 78-91.
[3]. Mishra, K., & Patel, R. (2021). Lead management strategies for small enterprises. SME Management Review, 5(2), 100-112.
[4]. Kumar, P., & Rao, M. (2022). Impact of TeleCRM solutions on small businesses. CRM & Business Journal, 9(4), 23-40.
[5]. Mehta, S., Arora, J., & Das, L. (2023). Cost-effective CRM strategies for startups. International Journal of Business Research, 11(2), 55-70.
[6]. Sharma, K., & Verma, N. (2022). Case study: CRM transformation in manufacturing SMEs. Indian Journal of Business Strategy, 7(1), 91-105.
[7]. Jain, R., Kumar, T., & Singh, D. (2023). AI-powered TeleCRM for small businesses. Emerging Technologies in CRM, 6(3), 60-75