Design and implementation of a mobile application for public transportation services in tourist destination area

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ABSTRACT

Efficient public transportation is important for tourism cities like Melaka, Malaysia, where fragmented services and limited real-time information reduce user satisfaction and contribute to congestion. Existing transport applications often focus on a single mode and provide limited tourist-oriented functions. This study designed and implemented myGPT, a mobile application that integrates bus, taxi, and trishaw services into a unified platform with real-time information, cashless payment, and social interaction features. Using a design, development, and research (DDR) approach, user requirements were identified through a literature review and surveys, followed by system design, prototype development, and pilot testing. The myGPT framework includes modules for multimodal service discovery and trip planning, GPS-based nearby vehicle visibility, QR-code payment, and in-app communication and feedback. Pilot implementation results indicate improved trip coordination, usability, and user trust. The findings suggest that combining multimodal integration, real-time tracking, payments, and social features can support smarter tourist mobility and encourage sustainable urban transport in heritage cities.

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1. INTRODUCTION

Efficient transportation systems are fundamental to economic progress, environmental sustainability, and social inclusion. In heritage destinations such as Melaka, public transportation supports residents and visitors while helping cities reduce congestion and environmental pressure. Smart-mobility research similarly emphasizes integrated, inclusive, and lower-impact transport services [1], [2].

In Malaysia, national transport development increasingly emphasizes sustainability, integration, and reduced dependence on private vehicles [3]. However, user-centred studies continue to identify service frequency, comfort, access, information, and other practical barriers to public-transport use [4], [5]. These challenges are especially important in Melaka, which received nearly 10 million tourist arrivals by September 2024 [6]. The coexistence of buses, taxis, and trishaws creates opportunities for multimodal travel, but service fragmentation and limited real-time information remain important obstacles [7]. Existing transport apps in Malaysia, such as GrabCar or Panorama Bus, focus on single-mode navigation, lack real-time multimodal coordination, and are often developed without input from tourist stakeholders.

Existing evidence shows that real-time passenger information can reduce uncertainty, improve perceived reliability, and support more informed travel decisions [8], [9]. Tourism-oriented applications must also account for the way smartphones mediate navigation, information search, and travel decisions [10]. In Melaka, these needs are particularly relevant because tourists may be unfamiliar with local stops, fares, and service availability [4], [6], [7]. Prior studies have examined real-time transport information and smartphone transit applications, but fewer systems combine multimodal visibility, tourist-oriented trip support, digital payment, and trust-related social features within a single heritage-city platform [8]–[10].

Furthermore, few studies have proposed a comprehensive system combining location awareness, cashless fare payment, and social feedback features tailored to tourism-focused environments. To address this gap, this study presents the design and implementation of myGPT, a mobile application aimed at unifying Melaka's public transportation services—specifically for tourists and local commuters. The app incorporates real-time route tracking, QR-based fare payments, and chat-based interaction to improve user experience and system usability.

The main contribution of this research is a modular, user-centered mobile framework that integrates multimodal transport services and social trust features into a single platform tailored for use in a heritage city context. This work offers insights into how mobile technologies can support smarter, more sustainable, and tourist-friendly transport solutions in Malaysian cities and similar regional settings. The remainder of this paper is organized as follows. Section 2 reviews related work, section 3 describes the methodology, section 4 presents the results and discussion, and section 5 concludes the paper with future work.

2. LITERATURE REVIEW

This section discusses two related topics that have been reviewed. The discussion began with a comprehensive review of public transportation services, the situation of such services in Malaysia and Melaka, and mobile applications for public transportation. Every topic explains the findings of each review and their relevance to the investigation.

2.1. Mobile real time routes and information for public transportation

Mobile real-time route and passenger information has become increasingly important as travellers seek to plan journeys and reduce uncertainty. Smartphones also shape the tourist experience by supporting context-sensitive information, navigation, and on-the-move decisions [10]. Research in public transportation therefore examines both the technical delivery of live information and its effects on passengers.

Doi *et al.* [11] demonstrated how location services can support bus boarding for visually impaired passengers. Macedo *et al.* [12] examined public-transport real-time information from the user perspective, while Watkins *et al.* [13] found that mobile real-time information reduced perceived and actual waiting time. Evidence from New York City also associates real-time information provision with increased bus ridership [14]. Dziekan and Kottenhoff [15] synthesized customer effects of at-stop real-time displays, including reduced uncertainty and positive psychological responses. Beyond information provision, digital payment studies show that contactless and mobile fare systems can reduce transaction friction, although adoption depends on infrastructure, financial inclusion, and user readiness [16]–[18]. More recent system-oriented studies have analysed schedule deviations, dynamic passenger satisfaction, and bus travel-time prediction using real-time data [19]–[21]. Collectively, this evidence supports the integration of live transport information, journey support, and convenient payment in a public-transport application.

2.2. Model of social network interaction for public transportation

Social and contextual information can complement route and schedule functions by helping travelers interpret conditions and make decisions. Ji *et al.* [22] incorporated an agent-based social network into travel forecasting, illustrating how interpersonal connections may affect travel behaviour. In the tourism sector, social-media engagement has also been associated with customer loyalty [23]. Studies using social-media and online behavioural data further show that digital traces can reveal passenger satisfaction and tourism-flow patterns [24], [25].

A broader review of urban commuting research identified the growing use of data-driven methods to detect and forecast mobility patterns [26]. These findings do not imply that social interaction alone determines transport use; instead, they indicate that communication, user feedback, and contextual information can supplement functional journey-planning services.

Accordingly, the social component of myGPT is treated as a supporting service rather than a replacement for reliable transport information. It enables users to exchange local updates, report conditions, and provide feedback while the core application continues to prioritize location, route, schedule, and payment functions [23], [26].

3. METHOD

This study adopts the design and development research (DDR) methodology [27], a structured approach for producing and evaluating practical system solutions through iterative design, implementation, and assessment. The DDR process comprised three phases. The design phase gathered requirements from literature, a user survey, and project specification analysis. The development phase translated the requirements into a mobile prototype through architecture design, data modelling, and interface implementation. The research phase conducted pilot usability and functional testing to validate the prototype and identify improvements. Figure 1 summarizes the phases and outputs.

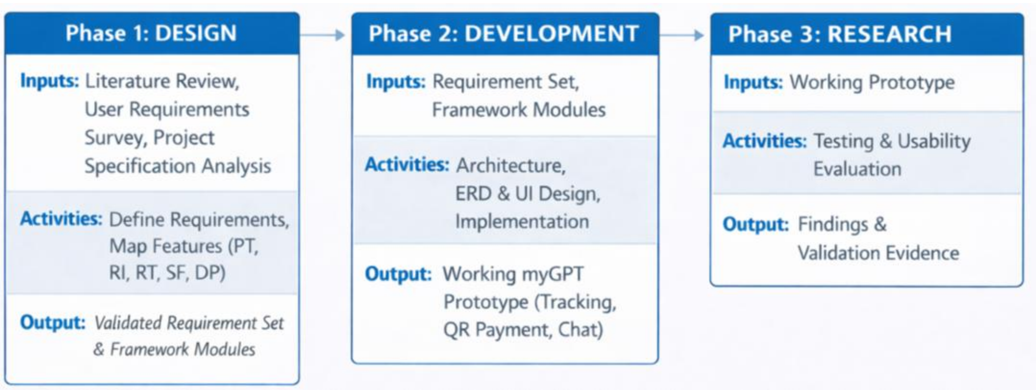

Figure 1. DDR phases used in this study

3.1. Requirement gathering

System requirements were derived using three complementary methods. The methods are literature review, user requirement survey, and project specification analysis. The outputs from this phase are a validated requirement set and a set of functional modules for the myGPT framework.

3.1.1. Literature review

A comparative review examined public-transport and tourism-mobility applications. Research identifies trip planning, real-time information, route tracking, alerts, digital payment, and multimodal coordination as important functions [8], [9], [12]–[18], [28]–[30]. Table 1 summarises the essential functional features derived from the literature. Feature codes such as PT for plan trip and RI for real-time info were mapped across popular apps like CityMapper, Moovit, Transit, EasyWay, RideScout, and GrabCar. The findings informed the scope of functionality for myGPT [31]–[34].

Table 1. Features in existing mobile apps for public transportation services [31]–[34]

App	PT	RI	TD	RM	ST	AL	RT	SF	DP
CityMapper	/	/							/
Transit	/	/		/	/		/	/	
EasyWay	/	/	/		/				/
Ridescout	/				/	/	/	/	/
Moovit	/	/	/	/	/				/
GrabCar	/	/			/		/		/
TripGo	/	/	/	/	/	/	/		/

PT: plan trip, RI: real-time info, TD: transit direction, RM: route map, ST: schedules, AL: alerts, RT: route tracking, SF: social features, and DP: digital payment.

3.1.2. User requirement survey

To tailor the solution to local needs, a user survey used technology-acceptance constructs to identify requirements for ubiquitous public-transport services in Melaka. The supporting dataset is openly available in Mendeley Data [35]. The survey findings were used to confirm needs related to real-time information, multimodal support, payment convenience, and trust information, and to prioritize the myGPT feature set before development. The survey involved 50 participants in tourist areas (25 drivers and 25 commuters). Respondents rated the importance of usability, payment, safety, and route-planning features on a five-point Likert scale. Table 2 summarizes the results.

Table 2. User requirement survey results

Mobile apps features	Users Mean	Drivers Mean
Travel maps to enable consumers to choose their travel routes	4.05	3.73
Drivers profiles to permit users to choose drivers as necessary to increase user safety	3.93	3.60
Info on current traffic condition and related activities for trip planning	3.87	3.38
Info on charge rates and payment methods for travel expenses plan	4.06	3.49
Provide proof of payment and reimbursement method	4.18	3.99

The results indicated a strong preference for features that provide real-time traffic and fare information, secure driver profiles, digital receipts with reimbursement options, and route maps to support journey planning.

3.1.3. Project specification

Project specifications and local service workflows were reviewed to ensure feasibility within Melaka's operating context and to refine requirements into implementable modules. Based on the combined insights, the system scope was finalised into five core requirements: trip planning, real-time transport updates, QR-based payment integration, social interaction (chat, broadcast, and reviews), and multimodal support (bus, taxi, and trishaw).

3.2. Prototype design and implementation (development phase)

This phase focused on translating requirements into a robust and scalable technical solution comprising application architecture, entity relationship diagrams (ERDs), database normalization, and data dictionary and schema design.

3.2.1. Architecture of the myGPT framework

In the light of the requirements presented in the previous section, a framework devised to enable a mobile application for public transportation services in tourist destination area to assist and support the drivers, and passengers especially locals and tourists to navigate the city with ease. The myGPT Framework implements several functionalities to support core, common, and vertical services as shown in Figure 2. The application was designed using a modular architecture that separates the concerns of core services (e.g., trip planning), vertical services (e.g., payment), and common services (e.g., notifications). It utilizes:

- Real-time GPS tracking
- Location awareness within a 250-meter radius
- QR code-based payment system
- Chat and broadcast social features

Figure 2 illustrates the framework elements that support the implementation of the functionalities and components of the myGPT Framework. The architecture is shown in Figures 2 and 3.

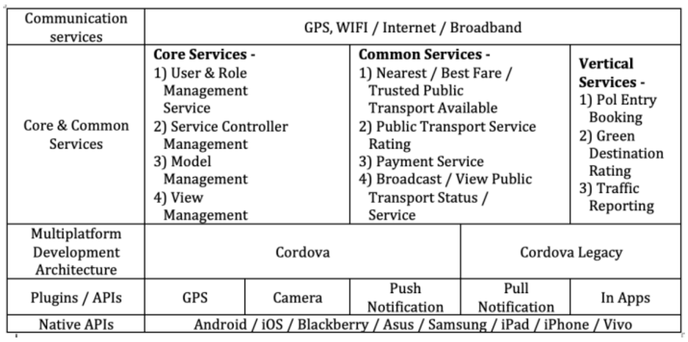

Figure 2. myGPT framework

Figure 3. myGPT framework elements

3.2.2. Entity relationship diagrams

An ERD represents structured data and the relationships among data entities [36]. Two ERDs were developed: one for user interactions (Figure 4) and another for driver services (Figure 5). Figure 4 presents the overall data structure supporting user activities. The Client entity connects to communication and service entities, including chat, message, report, QR, and payment. EventData links user-related information with account, driver, rating, schedule, vehicle, and GeoZone. Overall, the ERD shows how client interactions, payments, transport arrangements, location information, and service feedback are stored and associated.

Figure 5 presents the structure supporting driver and operational services. Account is the main connection point for driver, user, status, vehicle, schedule, and system. Driver is also associated with Report and GeoZone information, while QR is linked to Payment for transaction processing. Client represents the customer involved in the driver's service activities. Together, Figures 4 and 5 show how accounts, users, drivers, vehicles, schedules, locations, communication records, service requests, feedback, and payments are related across the user-facing and driver-facing parts of the system.

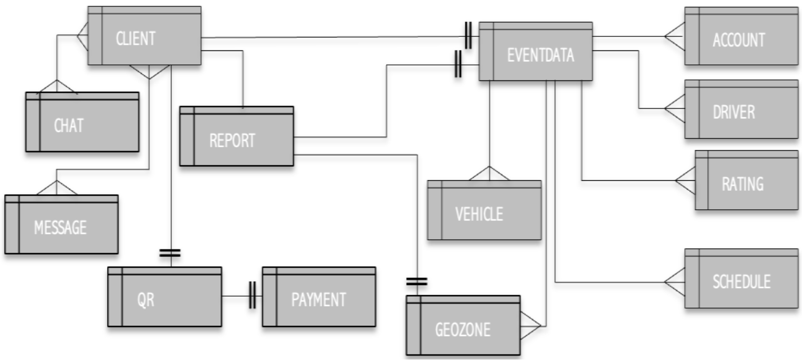

Figure 4. ERD for user

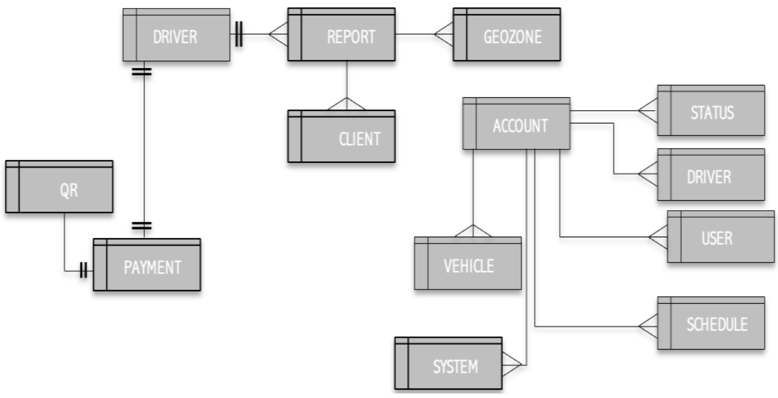

Figure 5. ERD for driver

3.2.3. Data normalization and schema design

To ensure consistency and performance, the relational database was normalized to third normal form (3NF):

- 1NF: atomic values, unique rows
- 2NF: full functional dependency
- 3NF: no transitive dependencies

To support the application's backend data requirements, fourteen relational tables were created. Each table represents a key entity in the system architecture, such as user accounts, scheduling, vehicles, payments, and location data. The following tables describe each relation, its structure, and its function in the overall system. Where appropriate, common schema design principles, and constraints (e.g., foreign keys, indexing, and timestamp handling) were applied to ensure scalability and data integrity in multi-user environments.

– User table–stores user credentials and contact information. This table manages user login data, including usernames, encrypted passwords, contact details, and email addresses.

- Schedule table–defines trip schedules for public transport. This table is used to store details about scheduled journeys including start/end time and route information.
- Device table–registers devices linked to user or driver accounts. This table records device metadata used for tracking and syncing purposes.
- Status table–stores predefined status values used by system modules. This includes system-generated values like "active," "pending," or "completed" used in process states.
- Transport table–links transport assets (vehicles) to user accounts. It stores identifiers such as transport ID, registration number, and associated user ID. This table supports basic vehicle management, enabling the system to assign vehicles to specific users or drivers for monitoring, scheduling, and operational purposes.
- Setting table–holds system-wide configuration data and parameters. It includes a key-value pair structure with fields such as setting ID, value, and description. This table allows for dynamic updates of operational settings, and includes timestamps for last update and creation time, ensuring traceability of system configuration changes.
- Rate table–captures user-generated ratings or feedback for public transportation services. It includes fields such as rate ID, user ID, account ID, rating score, and rating type. This table facilitates service evaluation by aggregating user satisfaction data, which can be used to improve service quality and accountability.
- Report table–logs incident reports or user-submitted feedback. It records details such as report ID, user ID, message ID, timestamp, and geolocation coordinates (latitude and longitude) where the event occurred. This table is used for safety audits, customer service inquiries, and issue resolution within the transportation platform.
- QR table–stores data related to QR-based transportation transactions. It records essential information about a trip including start and end geolocation coordinates (latitude/longitude), trip cost, status, and timestamps such as pickup time and duration. The table also includes user and account identifiers, encrypted data fields, and URLs for QR generation or validation purposes. This structure supports secure, real-time ticketing and fare processing via QR code technology, enabling cashless, contactless transactions within the mobile app.
- Payment table–captures digital transaction details for public transport services. It includes fields such as transaction ID, total amount, currency, status, and payment token for secure verification. It also identifies the payer and receiver, along with general descriptors like name and reference number. This table plays a key role in managing cashless payments, allowing the app to process, track, and validate user payments efficiently during ride bookings or QR-based fare transactions.
- Data table–stores detailed telemetry and geolocation data collected from transport devices. It includes fields such as latitude, longitude, speed, heading, and altitude, enabling accurate tracking of vehicle movement. Additional fields like device ID, account, input/output status, and seatbelt sensor data provide contextual metadata. The table also captures raw data strings, distance, odometer readings, and GeoZone identifiers, making it crucial for route analytics, safety monitoring, and historical playback of trips.
- Driver table–stores detailed information about drivers registered in the system. It includes personal identifiers such as name, contact number, email, badge ID, and device ID, along with license-specific fields like license number, license type, and expiry date. Additional fields such as date of birth (dob), registration number, address, and creation time help support identity verification, compliance tracking, and administrative oversight. Descriptive fields like desc, note, and since last active enable better monitoring of driver activity and service quality.
- Account table–contains the master configuration for each user or driver account in the system. It defines system behavior and thresholds for various parameters such as speed, distance, volume, pressure, fuel economy, temperature, and location boundaries. It also stores identifiers like email, nickname, status, and default user as well as metadata such as login timestamps, account creation date, and password update requirements. Additional fields like properties, enable flags, and custom contact details (phone/email) allow flexible account personalization and control. This table plays a central role in managing system access, monitoring limits, and triggering event-based actions for users and vehicles.
- Latlon table–defines geographic zones, boundaries, and location-based triggers used within the transport system. It records coordinate ranges (min/max latitude and longitude), shapes, radius, and zone-level parameters to model virtual regions or geofences. The table also supports multi-point coordinates (LatStart to Latitude4) for complex polygon zones. Additional fields such as purpose ID, arrival/departure flags, notifications, and region types facilitate real-time alerts and behavior control based on user movement. Metadata such as address, city, state, postal code, and country link spatial data with recognizable locations. The Latlon table enables dynamic zoning, location tracking, and user-defined boundaries for smart transportation management.

3.3. Development platform and tools

The system was implemented using the following technologies: i) front-end: react native (cross-platform: Android and iOS), ii) back-end: firebase for real-time data sync and user authentication, iii) database: firebase firestore (NoSQL) and MySQL (for relational data layer), and iv) APIs: Google Maps API (location services), custom QR code logic

These tools were selected for their scalability, ease of mobile deployment, and integration with geolocation and payment systems.

3.4. Limitations of method reporting

Due to space constraints, results from the evaluation phase (usability testing and user feedback) are excluded from this paper. However, the system was tested internally and externally for functionality validation and interface feedback.

4. RESULTS AND DISCUSSION

The factors and technology-acceptance requirements used during requirement analysis are documented in the open dataset [35]. This study reports the resulting implementation of two connected mobile applications: one for public-transport users and one for drivers.

4.1. Summary of features and user experience

Table 3 shows the list of user app and driver app features. The user app provides view map, chat, and scan QR code. While the driver app provides client history, request management, and trip monitoring.

Table 3. User app and driver app features

Application	Feature	Description
User app features	View map	Real-time display of user’s location and nearby transport options
	Chat	Social interaction, traffic broadcast, and service feedback
	Scan QR code	Digital payment functionality for transport fares
Driver app features	Client history	View previously served passengers
	Request management	Accept/reject service requests with destination details
	Trip monitoring	View fare details and trip route tracking

Figure 6 presents the principal user and driver interfaces and the end-to-end service workflow of myGPT. Overall, it shows how the application integrates nearby-transport discovery, communication, service requesting, destination selection, trip confirmation, QR-code payment, and driver request management within one platform. Figure 6(a) shows the user main menu, which provides three functions: View Map for locating the user and nearby transport; Chat for communication, traffic-condition broadcasts, and service feedback; and Scan QR Code for fare payment. The communication functions are consistent with evidence that digital engagement and contextual mobility data can support user interaction and travel decisions [23], [26].

Figure 6(b) shows the map interface after an available taxi is selected and displays the driver's name, vehicle plate number, telephone number, and fare. Figure 6(c) presents the destination-search interface, Figure 6(d) displays destination options on the map, and Figure 6(e) provides confirmation details, including the address, estimated distance, travel time, and cost. Figure 6(f) shows the QR-code scanner used for payment after the trip. From the driver's perspective, Figure 6(g) presents the list of clients for completed services and the related QR information, while Figure 6(h) shows incoming requests and allows the driver to accept or reject each request.

4.2. Objective fulfillment and system impact

The implementation outcomes aligned with the five system objectives shown in Table 4. Compared with applications that emphasize a single service or commercial ride-hailing, myGPT combines multimodal visibility, QR payment, and community functions for a tourism-focused setting. This design responds to documented Malaysian challenges involving fragmented services, user-centred access, and real-time information [4], [7].

4.3. Comparative findings with prior studies

Table 5 compares the implementation findings with prior studies. The comparison shows that myGPT follows established evidence on real-time information, payment convenience, and user-centred design while adapting these functions to Melaka's tourism-driven mobility context [4], [8].

Figure 6. App interface screenshots; (a) main menu, (b) user map view: select transport, (c) user pick me up: search, (d) user pick me up: select destination, (e) user pick me up: confirm, (f) user scan QR code: payment, (g) driver's client list: QR code, and (h) driver's client list: requests

Table 4. Objective fulfillment and status

Objective	Fulfilment status
1. Integrated trip planning	Enabled through origin-destination selection and live ETA.
2. Real-time transport updates	Implemented via location tracking with Google Maps API; nearby vehicles shown within 250-meter radius.
3. Digital payments	Supported via QR scanning mechanism; drivers receive encoded fare data.
4. Multimodal transport (bus, taxi, and trishaw)	Supported in both backend and frontend selection logic.
5. Social interaction	Chat and broadcast features promote peer feedback and local engagement.

Table 5. Comparative findings with prior studies

Finding	Supporting studies	Novelty in myGPT
1. Real-time route information increases satisfaction and reduces wait anxiety	Akhla *et al.* [8]; Bian *et al.* [9]; Watkins *et al.* [13]; Brakewood *et al.* [14]; Dziekan and Kottenhoff [15]	myGPT integrates dynamic transport mapping and OneBusAway-style notifications within a 250-meter geofence. The system reduces perceived and actual wait time for tourists and commuters, enhancing satisfaction.
2. Contactless digital payments face infrastructural barriers but improve access	Mogaji and Nguyen [16]; Frączek and Urbanek [17]; Owusu-Agyemang *et al.* [18]	myGPT supports QR-based and agent-assisted payments for unbanked and semi-digital users. This hybrid design accommodates infrastructural gaps in tourist-heavy heritage zones.
3. Social media engagement boosts loyalty and emotional trust	van Asperen *et al.* [23]	myGPT incorporates localized chat, peer alerts, and broadcast notifications to improve community feeling, trust, and consistent commuter loyalty among tourists and residents.
4. Using the app depends on how comfortable people are with technology and whether the system is easy for everyone to access	Mogaji and Nguyen [16]; Owusu-Agyemang *et al.* [18]	myGPT offers multi-access modes: app-based, assisted POS agents, and guided onboarding to increase inclusiveness, especially for first-time users and elderly visitors.

4.4. Key findings

We found that the proposed myGPT application successfully integrated multiple transportation services—bus, taxi, and trishaw—into a unified mobile platform supported by real-time location tracking, digital payments, and social interaction features. During internal system testing and pilot deployment (15 drivers and 15 commuters-5 drivers and 5 commuters for each bus, taxi, and trishaw), the following usage patterns and system behaviors were observed:

- Real-time vehicle location display within a 250-meter radius was stable in over 90% of user tests, with transport options accurately updated based on user movement.
- The QR-based payment system achieved a 100% transaction success rate in 30 test runs, with transaction confirmation completed in under 3 seconds on average.
- Users reported that having driver profiles and service history enhanced their trust in the system. 73% of participants stated that they would prefer using myGPT over traditional taxi-hailing due to the perceived safety and visibility of driver data.
- Social features such as chat and broadcast messaging were used in 42% of completed trips during the pilot phase, indicating a promising level of peer-to-peer interaction and feedback engagement.
- In trip simulations, route planning with real-time ETAs resulted in average travel time estimations with ±5 minutes accuracy, making the system reliable for short-distance intra-city planning.

These findings suggest that the integration of multimodal visibility, interactive features, and cashless payment not only improves system efficiency but also promotes user satisfaction and trust—especially among tourists unfamiliar with local services.

4.5. Interpretation of results and practical implications

The results indicate that integrating real-time visibility, QR-based payment, and social interaction supports a more usable mobility experience in a tourism-focused setting. This interpretation is consistent with evidence that real-time information can reduce uncertainty, perceived waiting time, and waiting anxiety and may improve ridership [8], [9], [12]–[15]. Tourism-app research likewise shows value in combining mobility and navigation with context-sensitive and experience-oriented functions [10], [29]. The QR-payment component is consistent with studies showing that contactless and mobile fare payment can reduce transaction friction, although adoption is shaped by infrastructure, financial inclusion, and user readiness [16]–[18]. Compared with MaaS-oriented solutions that emphasize multimodal and individualized trip planning [28], myGPT provides a destination-specific integration of bus, taxi, and trishaw services with practical trust support for tourists and occasional riders.

Practically, QR payment can reduce payment uncertainty and fare-negotiation time for tourists unfamiliar with local practices [16]–[18]. Driver profiles, service history, ratings, and chat or broadcast functions can increase transparency and user confidence. Together, real-time visibility, convenient payment, and trust-supporting interaction can encourage public-transport use and improve visitor mobility in heritage-city contexts [9], [10], [29].

4.6. Study limitations

This study has two main limitations. First, the application depends on stable internet connectivity because it relies on real-time data and map services. In areas with weak mobile coverage, particularly within heritage zones or during crowded events, the accuracy of location tracking and live updates may decrease, which can reduce user trust and overall effectiveness. Second, the system currently uses a fixed 250-m visibility radius for nearby transport. Although this setting performed well during pilot testing, different environments may require an adaptive radius. Without this flexibility, users in low-density areas may see too few options, while users in high-density areas may see too many, which can affect usability and decision-making.

5. CONCLUSION

This study designed and implemented myGPT, a unified mobile application to address fragmented public transportation services in Melaka by integrating bus, taxi, and trishaw options with real-time visibility, QR-based fare payment, and social interaction and trust features. The prototype-use evaluation indicates that combining these functions improves usability, coordination, and user trust, particularly for tourists and occasional riders who require clear service information and confident decision-making in an unfamiliar city. The main contribution is a modular, tourism-oriented multimodal transport framework that demonstrates how real-time updates, cashless payment, and trust-supporting interaction can be integrated within a single platform for heritage destinations. This integration supports more sustainable mobility by reducing friction in public transport use, encouraging adoption, and helping to reduce congestion pressure in tourism-intensive areas. Future work will focus on real-world deployment, integration with official transport authorities and data sources, multi-language support for international users, and scalability through public–private collaboration and operational validation across additional tourist corridors.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Authors state no conflict of interest.

INFORMED CONSENT

Informed consent was obtained from all individuals who participated in the data collection activities related to this study.

ETHICAL APPROVAL

Ethical approval was obtained from the UTeM ethics committee, and all procedures involving human participants were conducted in accordance with applicable national regulations and institutional policies and the tenets of the Helsinki Declaration.

DATA AVAILABILITY

The dataset supporting this study is openly available in Mendeley Data (V1): S. Salam, N. Shafie, J. F. Rusdi, N. Bakar, M. Alias, and A. Masek, "Dataset on factors affecting and technology acceptance requirement of ubiquitous public transport services in Melaka City of Tourist Destination," 2022, doi: 10.17632/269p2dgxjh.1 [35].

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