Cholo: Ticketing Kiosk for Gabtoli Bus-terminal

Background & Context

Gabtoli Bus Terminal is one of the biggest and busiest terminals in Dhaka, but most of the time, people have to buy tickets by hand. Passengers often have to wait in long lines while counter staff check to see if seats are available on different bus companies. This makes things less efficient, more frustrating, and more likely to go wrong. As part of its Digital Bangladesh plan, the GoB wants to replace manual ticketing with automated, self-service kiosks to make things faster, clearer, and more reliable.

Problem Definition

The ticketing process at the Gabtoli terminal is slow, manual, and not well-coordinated between the different bus companies.
Main issues:

- Passengers wait a long time in line to ask about seat availability.
- There is no centralized or online data about schedules or tickets.
- Operators check records manually.

Vision:

To make the ticketing process digital and automatic by making an MVP (Minimum Viable Product) that lets passengers easily check schedules, pick seats, and pay.

Objectives

- Shorten the typical wait time for passengers.
- Centralize all operators' seat and bus schedule data.
- Allow cash, cards, and mobile payments.
- Boost customer satisfaction and transparency.
- Insufficient integration and transparency between bus services.

Solution Approach

Cholo will function as a touchscreen kiosk supported by a basic cloud service. After selecting a route and time, passengers pay, confirm that they are adults, and select their seats from a visual layout. The system sends an SMS confirmation and prints a ticket. Operators use a simple admin panel to manage schedules. We start by developing the essential features and then make space for web or mobile interfaces. Financial transactions, operator schedules, and ticket data will all be

managed by a centralized backend. While concentrating on Gabtoli, the MVP will use Blocks to ensure future scalability to other transport hubs through a modular, cloud-based architecture.

Scops for MVP

1. **Touch-screen Kiosk UI** at the terminal

- Select destination, time, bus operator
- View seat layout, pricing, availability

2. **User Verification**

- National ID / age verification for adult confirmation

3. **Integrated Payment Gateway**

- Cash (with collection slot)
- Card swipe (POS)
- Mobile financial service (bKash, Nagad, Rocket)

4. **Ticket Printing**

- Printed QR code ticket + SMS confirmation

5. **Admin Panel for Operators**

- Manage schedule, seat inventory, prices

6. **Analytics Dashboard**

- Monitor sales, usage trends, wait times

Deliverables:

- Gabtoli's operational kiosks (pilot)
- An operator admin portal,
- A short summary of the pilot's findings and suggested next actions.

Long-Term Vision

Our long-term objective is to establish an intelligent, interconnected ticketing network that connects all intercity bus terminals, operators, and passengers in Bangladesh.
In addition to providing the government and transportation authorities with the information they

need to make better plans and better manage mobility, we want travel to feel effortless—cashless, transparent, and accessible.
Cholo will eventually expand from a single kiosk at Gabtoli to a comprehensive multi-channel experience that includes kiosks, mobile apps, and the internet, all of which are linked by national transport APIs and secure digital IDs. In addition to facilitating data-driven route planning, predictive scheduling, and improved public service delivery nationwide, this will let passengers plan, pay, and travel with ease.

Mid-Term Roadmap (Next 6–12 Months)

Quarter	Key Focus	Major Features
Q1 (Sprints 1-6)	Discovery & MVP Planning	Requirement workshops, wireframes, tech stack setup, API design
Q2 (Sprints 7-12)	Core Build	Bus search, seat map, booking, payment gateway, admin dashboards
Q3 (Sprints 13-18)	Pilot Launch	Kiosk deployment at Gabtoli, feedback loop, monitoring dashboard
Q4 (Sprints 19-24)	Stabilization & Expansion Prep	Reporting, analytics, multi-operator integration, rollout plan

Scrum Delivery Framework

Team Composition: 1 Product Manager (Scrum Master role), 3 Full-stack Engineers.

Sprint Duration: 2 weeks (24 sprints in total).

Key Ceremonies: Sprint Planning, Daily Standups, Sprint Reviews, Retrospectives.

Tools: Jira (backlog management), Confluence (documentation), Figma (UI design).

Deliverables per Sprint: Incremental feature releases, validated via stakeholder feedback.
A stakeholder demo and retrospective are held at the conclusion of each sprint to gather input and enhance delivery.

Success Metrics & KPIs

KPIs to measure impact:

- -60% Average queue time
- 70% Percent of transactions via kiosk.
- 95% Payment success rate.
- 99% System uptime.
- User satisfaction

Major challenges and risks:

- Reaching acceptance among bus operators regarding procedures and data sharing.
- Risk of adoption: some visitors would rather interact with people.
- Technical issues (hardware, network, payment).
- Scope break causes timeline slippage.

Support needed for a smooth launch:

- GoB/ICT assist in getting the operator's permission and approval for the kiosk's location.
- Executive funding for releasing cross-departmental needs and communicate priorities.
- Support for on-site operations (security, power, and a small staff to help users during rollout).

Architectural/technical support required:

- DevOps and architecture time spent on setup.
- A temporary UX designer to complete workflows.
- Availability of test credentials and payment gateway APIs.
- Space and permissions for pilot kiosks at Gabtoli.
- A small operations team to help users in the first two to four weeks after launch.

Resource sufficiency:

If we maintain a tight scope, an agile team of one PM and three engineers can produce an MVP. We will ask for temporary QA assistance during final testing and a temporary UX consultant

during design. We will ask for an additional engineer for the core development phase if sprint velocity indicates that we are lagging behind.

Conclusion

A centralized, low-risk method of introducing digital ticketing to a crowded terminal is Cholo. The strategy places a strong emphasis on early validation, rapid learning cycles, and prudent technical decisions.