

CASE STUDY

gtechna[•]

Macon, Georgia Goes
from Manual Operations to
AI-Enriched Parking Enforcement

Project Snapshot

Macon's parking enforcement coverage was historically low, with less than 10% of parking violations being tracked two decades ago.

Over the years, the city has methodically developed a modern infrastructure for on-street and off-street parking management. This comprehensive system now incorporates cutting-edge AI-driven License Plate Recognition (LPR) and GPS navigation, facilitating digitized curb management.

These advancements have boosted voluntary compliance among drivers and ensured a more predictable and stable revenue stream for the parking authority, which enabled a transformative shift in urban mobility and parking management. The city's forward-thinking approach is a model for integrating technology into public services, reflecting a commitment to accessibility, convenience, and urban innovation.

Solutions:

- Digital Permits
- Vehicle-mounted AI-LPR Technology
- GPS and GIS mapping capabilities
- Cloud-based Parking Enforcement Software
- Self-Service Parking Kiosks
- Ticket-by-Mail System
- Online Services and Ticket Processing

Benefits:

- Automated process, reduced interactions, enhanced efficiency
- Access to digital evidence package, dispute reduction, and efficient resolution process
- Increased overall safety on the streets
- Increased volunteer compliance and revenue
- Digital accessibility
- Fewer traffic disruptions



Context and Foundations

Parking enforcement and management in Macon relied on semi-digital solutions, manual permit issuance, and paper-based processes, causing inefficiencies and frustration. And, the absence of enforcement in certain zones led to uneven compliance with parking regulations.

The third-party provider kept exclusive control over the system's backend, restricting local authorities' ability to access critical information and make well-informed decisions regarding the city's parking infrastructure.

Park Macon introduced its new parking management and enforcement program in the summer of 2018, with the first goal being to make downtown accessible and business-friendly.

Today, the city relies on a comprehensive array of on- and off-street parking options managed from a unique, cloud-based platform, which provides a seamless and efficient parking program for locals and visitors.

gtechna helped Park Macon drastically reduce the time and resources required for parking enforcement. This optimization has trimmed costs and resulted in swift response times to violations, leading to a tangible increase in overall safety on the streets.



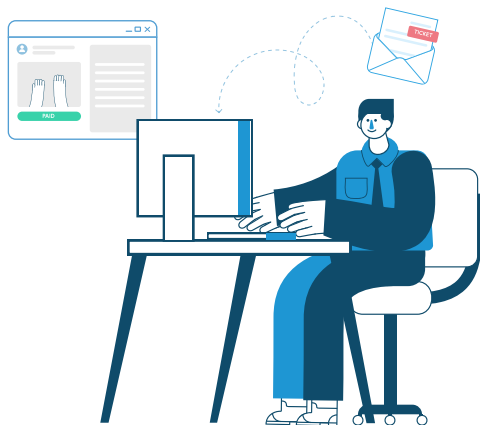
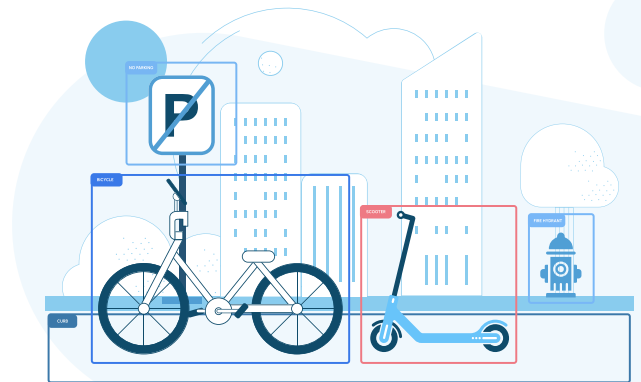
“ Park Macon needed cutting-edge technology to build an infrastructure that simplifies compliance with parking regulations, ensuring that following the rules is the easiest path for everyone. Together, we've developed a system that provides a positive experience in the city, where the focus is on convenience and respect for shared spaces. Macon has set a new standard for voluntary parking compliance, making the city more accessible and enjoyable for residents and visitors alike. ”

— Steven Schroeder, Chief Administrator, Park Macon

Digitizing the Curb with AI Technology

Macon's parking enforcement uses vehicle-mounted AI-driven License Plate Recognition with GIS mapping for curb digitization and an innovative Ticket-by-Mail system, creating a highly efficient and automated enforcement process.

This tech stack allows enforcement vehicles to patrol the city more effectively, using AI to analyze business rules in real time and identify parking violations in all curb management scenarios, including pick-up and drop-off zones, bike lanes, and fire hydrants.



The vehicles equipped with LPR technology scan license plates, and upon detecting a violation, the system leverages GPS and GIS data to pinpoint the exact location of the infraction.

The Ticket-by-Mail system is triggered as soon as a violation is confirmed, using the vehicle's onboard technology to immediately generate and dispatch a parking violation notice to the vehicle owner's registered address. This process helps reduce manual ticketing and ensures that enforcement is swift and precise.

Innovation for Improved Public Services

Integrated Cloud-Based Platform

- Park Macon controls the parking management and enforcement system from a single cloud-based platform that consolidates management and enforcement operations. This ensures seamless data integration, real-time updates, and efficient processing of payments, permits, and enforcement actions.



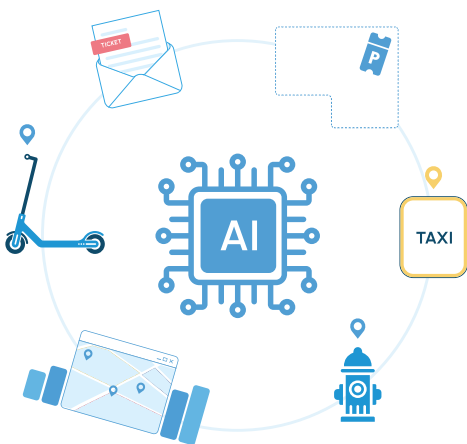
Digital Permitting and Payment Systems

- Macon offers digital permits for lots and residential parking, simplifying daily visitor pass acquisition and offering centralized subscription solutions for residents. This digital approach eliminates physical permits and in-person applications, cutting administrative tasks and improving convenience.
- Hourly parking spots accommodate short-term visits with flexibility and ease, as drivers can pay by space or by plate.
- Embracing the mobile-first preferences of today's citizens, Macon enables drivers to pay for parking using their smartphones, further simplifying the parking experience and encouraging compliance.
- A self-service parking kiosk offers citizens greater accessibility to view, pay, or appeal tickets online and register for digital permits. This enhancement has simplified these processes while enabling accurate data collection for measuring success.



Enforcement and Compliance

- Fixed LPR cameras in off-street parking areas and mobile AI-driven LPR systems on enforcement vehicles facilitate accurate tracking of curbside parking compliance and violations.



- Ticket recipients receive a detailed evidence package for violations, including detailed location data, rear and side profile images of the vehicle, the status of the valve stem, and even driver occupancy detection within the vehicle.
- With less manual enforcement needed, officers can dedicate more time to engaging with the community, providing education on parking regulations, and delivering superior customer service.

More Money for Downtown Streetscape Improvements

The transition from an outsourced operation to an in-house model, coupled with the latest technology by gtechna, has generated substantial savings in terms of time and money.

The funds generated from the parking program go beyond covering operational costs, as a significant amount of the \$1.1 million in annual revenue supports downtown streetscape improvements, providing a self-sustaining model for the city.

Enhanced customer satisfaction is another essential success indicator for the project. Macon's innovative pay-by-plate system and mobile app have empowered drivers to seamlessly handle payments, extend parking times, and avoid fines and penalties.

“We're redefining the parking experience in Macon, making it smoother and more intuitive for everyone who visits or calls our city home. Our collaboration with gtechna resulted in a dependable and citizen-friendly parking infrastructure, making every trip to the city core worry-free and more enjoyable for our community and guests.”

— Steven Schroeder, Chief Administrator, Park Macon

About AI-LPR Technology

gtechna's AI-LPR technology uses artificial intelligence to deliver highly accurate license plate detection and identification, enabling seamless integration into various enforcement scenarios, from on-street parking to complex, multi-use parking environments like bike lanes, loading zones, and areas near fire hydrants. The system's robust AI algorithms ensure high accuracy in plate reading and are adaptable and capable of evolving to keep up with urban mobility trends and changing parking regulations.

Book a Consultation

