

Better insights drive better parking experiences.

Verizon Parking Optimization



The availability and service quality of parking has a significant effect on your city. Whether the destination is downtown or the airport, sports venue, university or shopping center, difficult parking can cause lost time and economic activity, worse traffic, air pollution, forced urban sprawl—and frustrated citizens.

To alleviate these and other parking-related problems, you need more and better insights into the situation and the tools to help you analyze them. Now, Verizon Parking Optimization delivers exactly that.

Before parking operators can optimize parking, they must gain a better understanding of its patterns and pain points. The cloud-based Verizon Parking Optimization solution uses analytics to provide deep information and actionable insights into parking patterns, enabling near real-time adjustments to the service. By arming you with the right intelligence, we can help you better manage, monitor and price parking, while improving traffic flow and reducing emissions and drive times.

How Parking Optimization works

Our parking solution uses state-of-the-art computer vision technology on secure video sensors to detect real-time parking conditions and record metadata in our cloud platform. Parking applications and Big Data analytics services then process that data and transform it into meaningful business metrics for situational awareness.

The software-as-a-service (SaaS) system's components include the cloud-based management dashboard and analytics tools. It also has a set of parking services that are already integrated and available through MapQuest®—or as application programming interfaces (APIs) to integrate with digital signage, mobile applications or connected vehicles.

With the right intelligence, you can better manage, monitor and price parking while helping to improve traffic flow and reduce emissions, parking violations and drive times.

Features and capabilities include:

- Tools to create parking policies and apply them to groups to uncover usage and compliance insights; and options to name and manage attributes of individual spaces
- A wide variety of flexible analytical tools that allow parking managers to gain visibility into occupancy, availability, dwell time, turnover and revenue from usage and violations
- Alerts for conditions of interest
- APIs that integrate seamlessly with existing parking solutions providers

Benefits of computer vision over traditional video monitoring

Computer vision takes video sensing technology one step further than traditional video monitoring. It reduces content to metadata and saves bandwidth—unlike video streaming that requires massive bandwidth.

- Lightweight footprint doesn't require any in-ground or on-ground hardware
- Remotely configurable as parking environment changes
- Helps identify traffic-flow problem areas to help make road networks more efficient

Steer your city to remarkable outcomes.

With Verizon Parking Optimization, your city or municipality can reap a host of societal, economic and organizational benefits, including:

- Reduced emissions with decreased driving and idling
- Better parking enforcement with better violation identification
- Increased revenue through greater utilization and demand-based pricing
- Reduced time spent looking for parking

Ease of management speeds time to value.

The entire platform is simple to manage and monitor through the online management portal. It offers:

- An ultra-customizable reporting interface.
- Flexible configuration and organization of spaces.
- Integrated view of parking hotspots (high occupancy/low availability) by time of day, day of week and other time-based rollups.
- Near real-time alerts with multichannel support (such as SMS, email).
- Policy creation tools, such as pricing, max time and no-parking times, with audit trail for changes.
- Flexible delegation of management roles with accountability and security.
- Multiple parking facility form-factor support (surface lots, street parking, spot-by-spot and undemarcated).
- Support for in-house or outsourced operations team models.
- APIs to support integration with third-party systems and applications, such as navigation apps, smart metering and digital signage.

Rev up operations through the power of analytics.

With near real-time analytics and reporting, you can identify trends and spot issues before they escalate. Get the information you need with a wide range of analytics metrics, including volumes, turnover, revenue, violations, occupancy and more. Compare data across geographical regions and time periods, to help inform how external factors such as traffic, weather and local events impact parking across the city. Set up thresholds on key business metrics and receive alerts in near real time when these thresholds are exceeded, allowing you to proactively remediate issues.

Verizon Parking Optimization puts you in control of such a wealth of intelligence that you can pinpoint parking needs and problems with surgical accuracy—and develop policies and scenarios to keep traffic moving.

The solution that pulls it all together

Verizon is changing the game by offering a comprehensive bundled parking solution that covers wireless network access, cloud, licensing and support—plus easy integration with payment and enforcement solution providers.

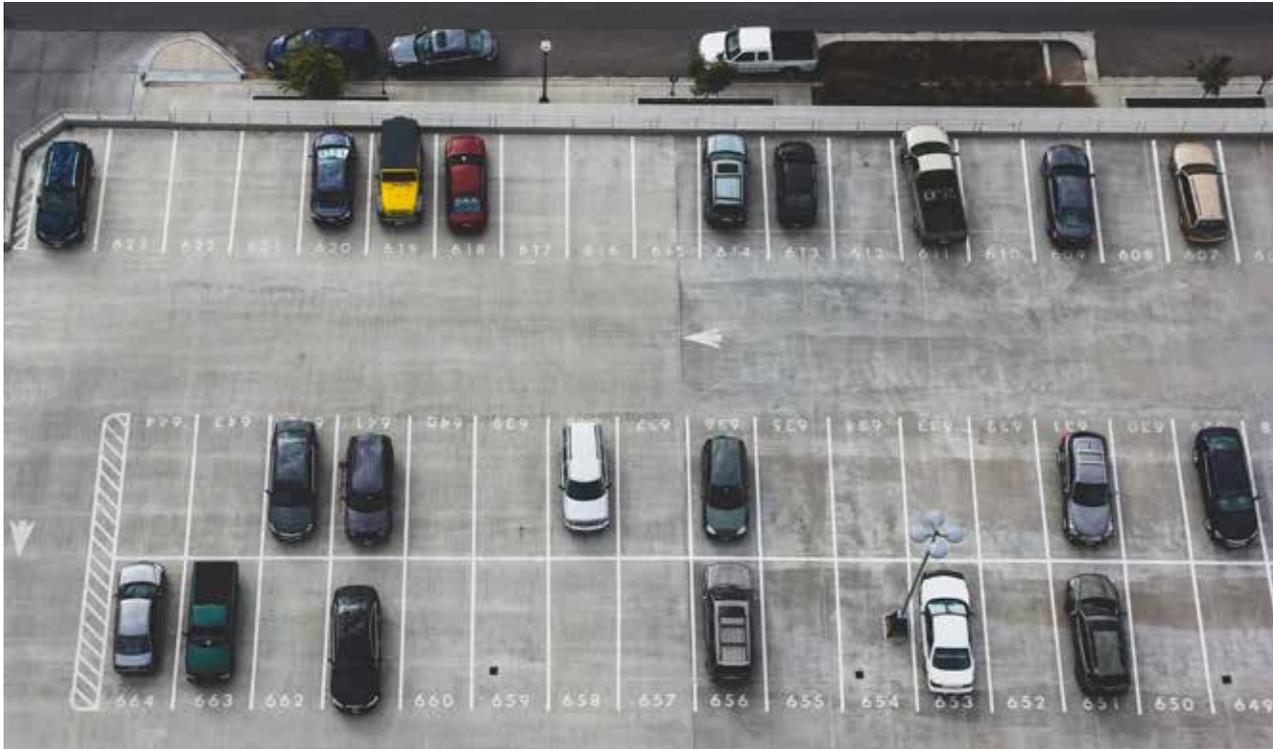
Get up and running fast using our design and development teams for installation. Our pay-as-you-go, SaaS model allows for easy entry so you can begin to implement several elements of the solution or the entire package. Even better, Verizon Capital Services can help you speed up implementation and avoid upfront costs.



The visualizations above show parking occupancy by location, as well as various metrics such as average occupancy per day or per hour, and average minutes in parking space.

Parking pain affects a city’s bottom line.

More than 63 percent of all drivers said they avoided driving to shops in the past year, and almost one in three gave up on reaching their destination due to parking problems. Avoiding retail and leisure can have a significant impact on the local economy as drivers turn to the internet or out-of-town offerings.¹



Parking Optimization can result in reduced congestion and emissions, better parking enforcement, increased revenue and less time for citizens to find a spot.

Why Verizon?

Whether it's improving driving safety or asset security, no one can match the quality and breadth of resources that Verizon can deliver.

- We've got a broad range of advanced hardware, software and services to cover your city's needs.
- We bring the analytics and expertise to help you transform the data delivered by our smart solutions into actionable information.
- We even offer managed services and financing programs to help you fund, deploy and operate your smart city infrastructure efficiently.

Learn more.

To find out how Verizon Parking Optimization can revolutionize parking in your city, please visit verizonenterprise.com/parking.

¹ *The Impact of Parking Pain in the US, UK and Germany*, INRIX Research, July 2017. Network details & coverage maps at vzw.com. © 2018 Verizon. SB780418