

Why *Parking Matters*[®]

The case for why parking—and the expertise of parking professionals—is integral to the future of our cities.

Where's your car right now?

Chances are, it's parked. On average, privately owned cars and light trucks spend 95 percent of the time in a space¹ while their owners work, shop, dine, sleep, and otherwise go about their daily lives.

Have you ever given up on trying a new restaurant because you couldn't find a parking space nearby? Or wasted time (and fuel) circling and circling to find a place to park near your destination? Then you know *Parking Matters*[®].

There's a very good reason parking is a prime consideration when new businesses and housing are constructed: Parking is often the connection between where we are and where we want to go. It keeps people moving. Our jobs, our homes, and how we spend our free time are all affected by where we can leave our vehicles when we arrive. Knowing that, successful cities and towns are making parking a pivotal part of the economic conversation.

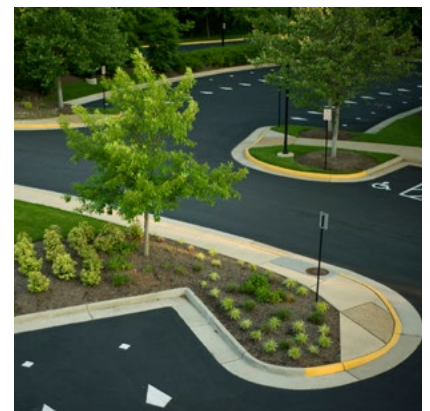
What concerns decision-makers is that the number of vehicles on the roads continues to rise. In the third quarter of 2013, an estimated 247.9 million cars and light trucks were on the road,² and that number is expected to rise to 284 million by 2025.³ At present, there are three non-residential parking spaces per vehicle in the U.S. (approximate total: 800 million),⁴ and only 5 million parking meters.⁵ How will we meet the growing need? How will we accommodate all trips people wish to take? How will we provide the right amount or parking?

Economics of Parking

The world is growing increasingly urban; 60 percent of the global population is projected to live in cities in 2030.⁶ By 2025, urban areas are expected to account for 86 percent of the world GDP.⁷ This raises some important questions: Where will everyone park? And how much traffic congestion will be created by the search for parking spaces?

In one year alone, drivers in a 15-block area of Los Angeles collectively put 950,000 miles on their odometers looking for parking spaces.⁸ To put this in perspective, that is equivalent to about 38 trips around the planet Earth. From coast to coast, traffic congestion cost the U.S. a whopping \$121 billion in 2011.⁹ And the environmental effect of the resulting carbon emissions is immense.

The U.S. parking industry does more than perhaps any other to keep people moving into, within, and out of cities. It's conservatively estimated to be a \$30 billion industry.¹⁰ Because parking has such a huge effect on what happens in cities and towns and how the greater transportation system functions, decision-makers are beginning to realize that it's critical to employ parking expertise at the beginning of the planning process. Designing and implementing an effective, professionally-managed parking strategy can mean the difference between frustrating and costly traffic congestion and efficient, time-saving traffic flow. When local governments tap into the technological revolution that is occurring in the parking industry, they discover a powerful tool in their quest to improve cities.



Why Parking Matters® (cont.)



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Smart Parking

Smart parking is where technology, economics, and the customer experience converge to create more livable, sustainable communities. It's a common denominator of forward thinking, sustainable communities in transportation, and cities that have embraced it know why. Used in tandem with smartphone apps and/or GPS, these systems give drivers real-time directions to an available meter or space. In some configurations, drivers are able to reserve spaces, eliminating the need to circle around the block. By 2020, the industry expects to have 950,000 of these sensor-enabled parking spaces, dramatically changing the picture of parking throughout the country. Off-street, smart parking measures such as real-time electronic guidance systems that provide space availability are also having a favorable effect on driver convenience and contributing to sustainability, according to a 2014 study conducted by *American City and County* magazine. Coupled with effective parking management strategies and policies, these new technologies are having a significant effect.

In a recent poll of members of the parking industry, the trend they see having the greatest effect on the industry today is the move toward innovative technologies to improve access control and payment automation.¹¹ Last year, the global market for smart parking systems was \$60 million¹² and that number is clearly on the rise. What is the potential of that? Here's one example: a 2006 study showed that 45 percent of Brooklyn, N.Y. traffic consisted of drivers circling around, looking for parking.¹³ Imagine those Brooklyn streets when you eliminate nearly half of the congestion caused by unnecessary driving.

Planning smart parking strategies can yield huge advances for cities. By incorporating technologies such as street sensors, real-time wayfinding systems, and apps that let drivers find, pay for form, and even reserve parking, you reduce congestion dramatically. Installing smart meters (which report both their operational status and whether they're occupied) provides city managers with an effective tool to ensure regular space turnover, especially near restaurants and shops. Those same meters can also communicate with smartphones on the other side, letting drivers know their time is about to run out and, where appropriate, allowing them to add time via credit or debit card without actually returning to the meter. That means fewer tickets and a more pleasant, less stressful parking experience. The revolution in technology is being maximized through equally smart analytics that contribute to parking management policies related to time limits, prices, and more.

The bigger picture is obvious: when more people flock to downtown areas, it boosts the economy. As cities that have embraced these technologies attest, the revenues generated by increased turnover and meter payments far exceeds what previously came from parking citations—and more than justifies the investment in new technology.

Need proof? A 2013 study pitted a group of drivers using smart technology against a group relying on luck and watchful eyes in the same part of town. Those using smart parking sensors spent 43 percent less time driving, drove 21 percent fewer miles, and found spaces that were 22 percent less costly than those looking for spaces using current methods.¹⁴

Sustainability and the Greening of Parking

Smart parking systems that guide drivers to parking without circling are likely to have the biggest effect on sustainability, according to parking professionals polled in IPI's *Emerging Trends in Parking* survey, International Parking Institute, 2013. But these

professionals also know that today's new technology can make a huge difference in the carbon footprint and economic performance of their facilities and the quality of life in the communities they serve. Efficient lighting upgrades, solar panels, permeable pavement, charging stations for electric vehicles (EVs), payment automation, and sustainable building materials are just a few of the ways that parking facilities are going green.

Examples of other sustainable strategies include:

- Solar panels on roofs, canopies, and even vertical walls that generate enough electricity to run a facility, and sometimes even harness enough to power other parts of the grid.
- New lighting technologies and systems that only turn lights on when they're needed (not 24/7), and light-colored and reflective paint—together dramatically slashing the amount of electricity needed to light a parking garage.
- Automated payment systems that help eliminate lines at the exit, reducing time spent idling and carbon monoxide and other greenhouse gas emissions.
- Garage design that uses natural air flow for ventilation and harnesses as much sunlight as possible for daytime interior illumination.
- Automated vehicle retrieval systems (AVRS) that enable the storage of more cars in less space, maximize land use, and reduce required amounts of construction materials and power.
- Green roofs and walls that filter rainwater and reduce the heat island effect.

In addition to these and other green measures, parking facilities are aggressively responding to the needs of a growing number of EV owners (some 35,000 EVs were sold worldwide in 2013¹⁵). The parking industry purchased 171,600 EV charging units in just one year in 2013, and continues to respond to growing demand.

The parking industry also is partnering with transit providers and designers to encourage people to use trains, buses, and other forms of public transportation, as well as bicycles. Besides devoting priority space to bike parking, an increasing number of garages is creating facilities for bicyclists to shower, change, store, and even repair their bicycles. Car- and bike-share programs are being incorporated into parking facilities across the U.S., especially on college campuses and in progressive cities. Today's sustainable parking facilities focus on the safety and convenience of pedestrians. Many now feature art, music, landscaping, and more to ensure that they have a pleasurable experience once they leave their vehicles.

The Green Parking Council, an affiliate of IPI, recently launched the industry's first certification for sustainable garage design, operations, and management, the Green Garage Certification program. The certification program offers an industry-specific standard, similar to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program. The parking industry is embracing all of these approaches to promote sustainability and improve its communities.

Tap Parking Expertise

From reducing congestion to boosting local economies, supporting businesses, and actually making the world a greener place, parking is really about moving forward. It's difficult to do most things until we are able to park our vehicles.

In recent years, the parking industry has undergone a revolution, embracing innovative concepts, technologies, and new ways of thinking and doing business that are designed

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to keep people and businesses moving forward like never before. This has given rise to a new breed of parking professional who's trained and focused on making the future of our cities, efficient, effective, and more livable.

Involving a parking professional, along with architects and urban planners, in the initial planning stages of development is becoming standard practice as cities come to embrace parking as an integral facet of both economic development and quality of life. This new focus on the importance of planning for parking from the beginning and consulting parking professionals early in the decision-making process is benefiting cities and citizens, and paving the way to a better future. ■

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“It is necessary and forward-looking to integrate parking policy and transportation policy in urban planning projects.”

Ray LaHood

Building America's Future, co-chair
U.S. Secretary of Transportation, 2009-2013
quote in *The Parking Professional*, June 2014

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