A 2012 decision by the Public Parking Authority of Pittsburgh established the city as the first in the U.S. to commit to the adoption of multi-space, pay-by-license-plate technology to manage a full network of on- and off-street metered marking.

The primary objective of the commitment to modernize couldn’t have been more basic to a core organizational mission: to improve the parking experience of meter customers while increasing the operational efficiency of metered parking management across the board.

The question that led to the authority’s action was how best to achieve those goals, both for the near and
longer term, and the selection of a plate-based process had its roots in the organization’s previous experiences with pay-by-space and pay-and-display multi-space systems. The first option created at-the-meter confusion regarding the space being purchased, and the second required a return to parked vehicles to display meter-issued receipts. Both inconveniences would be eliminated by the pay-and-go advantage of pay-by-plate technology. That feature, combined with other state-of-the-art components, led to a seven-year purchase and maintenance contract with supplier Cale America for the approximately 900 machines required to manage most of the authority’s inventory of metered spaces. Importantly, because of a highly competitive request for proposal process, no premium was paid for the substantial technological upgrade acquired. Instead, the provider recognized the value represented by Pittsburgh’s full-scale commitment to a new metering mode.

What’s My Plate Number?
The selection of a pay-by-plate system brought area drivers’ relationships with their license plates into sharp focus. Did they know their plate data by heart or have even some idea of its content? Or would they have to walk to the back of their vehicles—Pennsylvania is a rear-plate-only state—to copy the letter/number combination that would be required to operate the new system? The authority’s leadership team concluded that, excepting vanity tags, the latter circumstance was probably the norm. And to address it, management developed and implemented a low-cost program to smooth the introduction of pay-by-plate meters to the Pittsburgh market.
The solution was to produce and distribute a virtually weightless plastic key fob containing the authority’s website address, credit card payment information, and, most pointedly, a blank space for drivers to record their vehicles’ license plate data.

This represented a very low-tech approach to acquainting customers with the most sophisticated metering concept available, and it backed a $10 million authority investment with an informational aid priced at just pennies per unit.

Choosing an effective—and cost-effective—promotional tool was just the start of the educational process. A comprehensive delivery system would also be required, and implementing it would involve the shoe-leather investment of a number of authority employees.

**Hitting the Streets**

To start, the key fobs were hand-delivered to locations, groups, and individuals who might be helpful in familiarizing their respective patrons, constituents, and clients with the planned move away from the single-space, coin-operated meters that had been in place for decades. The distribution targets, sequenced largely by the installation schedule for the neighborhoods and commercial districts involved, included grocers and other retail businesses; hospitals; doctors; dentists; universities; restaurants and taverns; community centers; and the district offices of elected officials. In all, with fully 80,000 key fobs purchased and circulated, the program succeeded in meeting its two principal objectives: it provided a convenient source for the license plate data that would be essential to using the new meters, and it alerted motorists that a major change in metered parking services was on its way.

The implementation of a provision in the authority’s purchase agreement with Cale also contributed to a positive public response to the arrival of the new system. The contract required the firm to supply teams of “meter greeters” to guide parkers, step-by-step, through using the new machines. In numbers as large 20, depending on the size of the installation site involved, the teams were on hand as each successive meter grouping was placed into service, and they remained at those locations for a full two weeks. Informed, courteous, and patient, the greeters answered questions, interpreted the instructions contained on the meters’ solar-powered touch screens, and distributed key fobs for parkers to share with family members and others. Unquestionably, their role contributed substantially to an introduction and education effort that held start-up problems of a radical, city-wide change in metered parking practices to a minimum. It was quite a performance for a campaign process that began with a small plastic key fob reminder of a series of letters and numbers that Pittsburghers now find too important to forget.

**Behind the Scenes**

For the city’s parking authority, the new system had and will continue to have an enormous effect on its meter-related functions. Operationally, the machines’ capacity to accept credit/debit card payments—an entirely new service in most locations where they were installed—markedly reduces collection frequency and cash-handling activity. Evidencing that, card usage has risen dramatically, and now accounts for approximately 70 percent of meter-sourced revenue. Enforcement efficiencies have increased as well, and will improve further as officers in the field become more accustomed to the multi-space management of all of their respective coverage areas. The timing and location of their assignments are increasingly influenced by data on parking activity routinely generated by the new technology. And equipping vehicles with plate-reading cameras for monitoring paid-versus-unpaid parking time will add an entirely new dimension to the enforcement process.

The adoption of a new metering concept has had a considerable financial effect as well. The coin-operated models that were replaced had no capacity for credit or debit card use. That limitation deprived customers of convenience and frequently resulted in underpayments for parking time simply due to a shortage of coins on-hand. Conversely, the card option gives parkers the ability to fully pay for an anticipated stay without relying on seat-pocket change. And because customer preference ran so strongly in favor of card-sourced payments, revenue from metered spaces rose to at least equal the amount those spaces were expected to generate from their projected levels of activity.

Cash versus card data is compelling in that regard: when paying by credit or debit card, customers average just more than $3.10 per transaction, while payments in cash averaged $1.10 for each parking stay. The card-related gain, moreover, is in addition to the one realized almost immediately from the authority’s all-in commitment to
multi-space metering. Prior to the start of installation of the new units, Pittsburgh’s total complement of metered spaces, on-street and in surface lots, accommodated 8,700 parked vehicles. With installation complete, the capacity for income-producing spaces has increased by approximately 20 percent. For a nearly $40 million enterprise required to be financially self-sufficient, both increases in revenue opportunities are welcome developments. They allowed the authority to continue its progress in incorporating technological advances into its operations and helped increase its annual contribution to the operating budget of the City of Pittsburgh.

**More Benefits**

As meaningful as their performance has been to date, the effect of the new meters on future authority operations is likely to be even more dramatic. Their pay-by-phone component is an obvious example. When activated system-wide, the feature offers a great deal more than an additional customer convenience; it also represents an opportunity to achieve the long-term management objective of reducing or even eliminating the practice of controlling parking durations in given spaces by the posting of applicable time limits.

In the authority’s view, streets are for short-term parking. It also believes that the outcome can best be realized through pricing policies that drive longer-term meter parkers to off-street or fringe locations. The ability of a community to introduce the concept described as dynamic pricing requires the capacity to vary rates in accordance with the timing, location, and duration of parking stays. And its implementation is now possible in those jurisdictions with our new metering system and soon to be pay-by-phone option across a broad spectrum of their metered network. In cooperation with other government entities, the authority’s intent is to explore every opportunity available to add greater price flexibility to its meter management toolbox. The purchase agreement was reached in the anticipation that the meters now in service would remain in operation into the opening years of the next decade. The system that succeeds them—including the possibility that city streets could largely be meter-free—will depend on advances in technology available at that time. But this much is certain: the authority’s approach to the management of parking volume now under meter control will be as cutting-edge progressive as the system it has in place today.