



The City of Milwaukee, Wisconsin

Case Study





Realizing the Benefits of Pay-by-Space Metered Technology

As creatures of habit, we migrate to the old not the new. We're slow to adopt advanced technologies readily, even if these technologies replace the old with the new and bring with them a host of benefits.

Take Milwaukee. It is the largest city in Wisconsin. With a population of just over 600,000 in the city and 1.5 million in the metro area, City of Milwaukee (City) officials faced a conundrum: how to seamlessly transition from a proven, but outdated, parking meter solution to an advanced technology that offers improved payment options, streamlines parking operations and revenue, and keeps the parking faithful?

The answer lay in finding an equitable solution that benefited all parties. For the City, that meant a switch from the time-honored single-space meters to modern technology that embraced multi-space metering in a now deeply entrenched digital era. For the parker, that meant flexible payment options that yielded an array of services.

Enter Digital Payment Technologies (DPT), which stepped in to offer its multi-space on-street LUKE parking meter and test the waters with the Milwaukee parking faithful.

After determining its single-space meters had outlived their performance capabilities, the City turned to DPT for a solution to its parking needs, specifically deploying multi-space meters in a Pay-by-Space environment.

Why Multi-Space?

"The desire to install multi-space meters was driven by the downtown business associations," explains the City's parking operations supervisor, Paul Klajbor. "They wanted additional payment options for on-street parking. Additionally, the City considered multi-space meters as a way of providing parkers with extra services, such as receipts, alternate forms of payment, and networked meters. The City also viewed multi-space metering as a chance to provide better data that could be used to more efficiently manage the meters."

When evaluating whether to transition from single-space to multi-space technology, the City's

reasons were:

1. **Cost effectiveness**
Single-space meters that accept credit cards are prohibitively expensive.
2. **Reduce maintenance**
Multi-space units help to reduce maintenance on a per meter basis; single-space multi-payment meters do not.
3. **Ease of implementation**
Multi-space meter technology is easier for the City to administer than other options such as in-car meters that require a distribution system for purchasing and reloading the devices. Likewise, multi-space meters, as opposed to in-car meters, do not present a great learning curve challenge to use.
4. **Reduce downtime**
Fewer meters require less time to service when problems occur.
5. **Increase payment Options**
Multi-space meters provide a wider range of payment options, thus allowing rate increases to keep up with cost increases due to labor, maintenance, and supplies.
6. **Increase revenue**
As parkers can no longer receive free parking if a single-space meter breaks down. Multi-space meters are networked so that even if one meter stops working, parkers are still required to pay at any other on-street meter.

With these benefits in mind, the City moved forward with its plan to acquire multi-space parking meters.

Choosing the LUKE Pay Station

Having identified a market for its needs, the City set about identifying a vendor and local service company to fulfill its requirements. A Request for Proposal was issued and several proposals were received. DPT partnered with its local regional reseller, Automated Parking Technologies (APT) of Chicago, IL, to represent the LUKE product for sales and service. Presentations were evaluated by a committee comprising City personnel and a representative of the downtown business association. Four vendors were shortlisted. DPT and APT emerged as the winning contenders. APT was awarded the contract to provide the City with 103 LUKE pay stations in 2007 followed by an additional 74 in 2008.

“There were a number of reasons the City chose the DPT LUKE meter,” recalls Klajbor. “The LUKE offers various payment options as well as a receipt. Other important features included the color screen, the design of the meter, and the back-office software. In addition, the City information technology staff preferred the open architecture and the ability the City had to host the data on its own server. The LUKE also seemed to be the easiest to service in the field (minimal tools needed for mostly modular parts). A major reason the City chose the LUKE was because the evaluation committee and advisors believed the pay station was the easiest multi-space meter to use and that it would be the easiest for the public to transition to from single-space meters.”

Why Pay-by-Space?

The City’s decision to collaborate with DPT was tied in with its requirement to operate Pay-by-Space parking meters. Pay-by-Space requires parkers to enter their parking space number at the pay station to complete their parking payment and record. The pay station then records all paid and unpaid space data for enforcement within the meter network. Pay-and-Display doesn’t require a space number to be entered, but does require the placement of a receipt on the vehicle dashboard to facilitate enforcement.

While most cities have deployed Pay-and-Display modes of operations to date, Pay-by-Space is taking on greater popularity as cities become more familiar with its many significant advantages. Milwaukee favored Pay-by-Space over Pay-and-Display for three primary reasons:

1. **More efficient enforcement operation**
The City wanted to maintain an efficient enforcement operation. Requiring the enforcement officers to look onto each vehicle’s dashboard would have slowed them down and would have significantly decreased efficiency.
2. **Restricted parking spaces**
The City hosts a number of special events and for this reason, it wanted to maintain the ability to “hood” metered spaces during special events and during the summer construction period. It could achieve this by hooding the space markers at each parking space as well as informing parkers that parking was

not available at specific spaces when these space numbers were entered on the meter.

3. **Ease in adding time**

As a way of accommodating parker needs, the City looked to network its pay stations so that parkers could pay and add time at any meter in the city. While this is possible with Pay-and-Display operations, a key advantage is lost when a parker must walk back to their car to display the new receipt on the vehicle's dashboard.

Deploying multi-space meters has proven beneficial to the City largely because of the technology's ability to boost enforcement efficiency. The City built its own enforcement platform that uses GPS to track where an enforcement officer is and then graphically displays the expired parking spaces on a map on the officer's PDA. This is enabled by using DPT's Web Services application to export the data from DPT's backend management software, Enterprise Management System (EMS). The City is enabling some of the enforcement officers' Duncan Autocite X3s to access live EMS data as they write citations.

The additional advantages that are available with Pay-by-Space modes of operation can include:

Expanded management data

As the parking network can track the revenues and occupancy of specific spaces by the space number, parking managers can better manage their parking operation to determine which spaces may need adjustments to hours or rates in order to maximize revenues and efficiencies.

Increased revenues

Pay-by-Space technology eliminates the ability for drivers to move their vehicle to another space in the same rate zone and use the same Pay-and-Display ticket while also reducing the likelihood of giving a ticket with remaining time to another driver parked in another space.

Reduced paper use

The need to print a receipt is eliminated with Pay-by-Space as all enforcement data is tracked in the pay station rather than on the dashboard of a vehicle. As a result, the printing of a ticket can be made optional for parkers and can reduce paper usage.

Winning Over the Public

For the City, the benefits of the technology outweighed the costs, but it still needed to embark on a multi-pronged public relations campaign to woo the public to adopt the new meters. The City distributed informational brochures to business associations to disseminate to parkers in the downtown core. Parking staff trained public service ambassadors, employees of the downtown business associations who assist people with directions, to use the LUKE meters and to distribute informational brochures to the public. City staff assisted the public at the meters soon after implementation. Leveraging digital and broadcast media—cable TV and the Department of Public Works' parking Web site—the City extended its PR reach beyond the downtown perimeter to show and tell. As the first meters rolled out, the City held a press conference to draw attention to the technology and how intuitive it is to use. The City even had a giant cake made in the shape of the LUKE meter to celebrate its new acquisition. Signage was added to enhance visibility and educate on correct use.

The extensive PR campaign paid off. Figures released by downtown businesses showed 69 percent of Milwaukee's downtown parkers surveyed gave the thumbs up to the new meters. Less than a third preferred the old technology.

Lessons Learned

With such overwhelming support for its new metered technology, the City is looking to bolster its LUKE numbers in the coming year. As for maximizing the potential of the technology, the City is exploring other revenue streams such as enabling advertising on the pay station color screens and on the receipt paper. Pay-by-Phone services are also being considered.

Implementing new technology can present challenges, not least of which is striving for a cost-effective and seamless transition. Some of the lessons learned that can benefit the City in future installs include:

Consider all the associated costs

While the LUKE provides unmatched functionality, there are associated costs.



All meters require regular maintenance

Multi-space meter technology requires regular maintenance particularly in cold or humid/damp environments. The better maintained and cleaned the meters are, the less likely they will jam or malfunction.

A public education plan is vital

Even with all the concerted efforts the City made to educate the public on using its smart meters, there were still issues raised about how or where to pay.

Begin phase one with a small installation

The City installed one pay station for several months on a trial basis; it was not available to the paying public. The first actual installation involved 103 pay stations throughout the downtown core. "Although it caused an on-the-job learning experience, it would have been easier to learn with a smaller initial installation," admits Klajbor. Based on the lessons learned from the first installation, the City's second installation went much smoother.

Have patience

Any new system will have problems that could not be anticipated, and the users will have a learning curve to overcome. Parkers will voice complaints simply because of the change. Patience is needed to overcome this initial period.

There's no doubt smart technology trumps outdated operations, bringing with it a host of benefits, financial and operational. The sooner multi-space parking technology is adopted, the quicker the benefits can accrue and trickle down to the end user – the parker. Just ask the City of Milwaukee whose savvy business decision is reaping the benefits.

About Digital Payment Technologies

Digital Payment Technologies (DPT) is an innovative leader in the design, manufacture and distribution of multi-space parking meters, parking management software, and online services for the North American parking industry. The company's products provide complete financial tracking, control and reporting for parking revenue collected by municipalities, universities, parking management companies, and national parks, from customer payment through to bank deposit.

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