



# HIGH VALUE

**Building public acceptance  
for demand-based pricing.**

By Colin Stewart

**T**HE DISCUSSION OF ON-STREET PARKING RATES is a common one in the media as municipalities large and small realize they need to increase rates to increase revenue or generate turnover.

Most cities have recognized that price is a more demand-based and customer-friendly way to generate turnover than enforcement.

Winnipeg, Canada is no different in that regard, but the Winnipeg Parking Authority was able to influence the discussion and gain support for increasing on-street rates through consultation that included the presentation of transactional data for on-street parking.

Like many mid-sized cities, Winnipeg endured a period of limited growth in the downtown and so had little incentive to consider whether the primary goal of on-street metering—turnover—was being achieved. However, a number of factors began to change the fortunes of downtown, resulting in increased traffic. At about the same time, the city council established the Winnipeg Parking Authority (WPA) to oversee municipal on- and off-street parking operations. While off-street rates had increased with changes in the market, on-street rates had remained unchanged at \$1 per hour since 1992, resulting in long-term parking on the street being less expensive than parking off-street.

There has been a fair bit of academic discussion on the principle put forward by UCLA Professor of Urban Planning Donald Shoup, that if on-street locations with higher demand have higher prices, demand can be spread across the entire inventory, resulting in a level of occupancy around 85 percent. The ability to determine usage and thus determine occupancy with a level of accuracy beyond the parking guys looking at a map and commenting, “Lots of cars there every day, must be high demand,” has been the missing piece of the puzzle.

#### The Experiment

In Winnipeg, the planned upgrade of the on-street meter inventory from single-space meters from the 1970s to pay-and-display meters (multi-space paystations), provided the opportunity to test this theory. With the roll-out of new meters planned over a series of years, the WPA instituted a pilot project to determine if higher rates would achieve the desired level of turnover. From this pilot project, the authority then developed a method to achieve results similar to San Francisco’s *SFPark* initiative, but at a more manageable cost. Costs aside, unlike San Francisco, Winnipeg is a winter city. Snow plow operations make the embedding of objects in pavement less practical, and in-street sensors were not a realistic option.

Conveniently, one of the first areas where the new equipment was installed was around the major hospital campus, which provided an ideal pilot project control group; after all, the level of demand at hospitals is relatively constant and not dependent on seasonal fluctuations (with winter temperatures sometimes dropping to colder than -40 degrees Celsius with the wind chill, the seasons definitely have an effect on on-street demand), so the only variable

Before Pilot Project		After Pilot Project	
On-Street All-Day	Off-Street Daily Max	On-Street All-Day	Off-Street Daily Max
\$8	\$12	\$16	\$12

A portion of the map showing areas of high demand in downtown Winnipeg. Orange and red lines indicate streets where the usage was more than 75 percent, with red lines indicating areas where demand increased from 2009 to 2010. Surface parking is in solid yellow and parking ramps are outlined in yellow.



**Obviously, some assumptions need to be made. The WPA did this as follows:**

- The basic transaction was one hour (with \$1 coins in Canada, this is the most common cash buy).
- While daily transactions could be calculated, monthly analysis provided a manageable level of data.
- Usage of more than 100 percent means that while people may be paying for an hour, they are not staying the full time and so an additional transaction is available.

Sample Monthly Analysis				
Stalls	Hours	Transactions	Days	Usage
8	6.5	987	22	86.2816
Potential Transactions: 1144				

is price. By adjusting the rate to \$2 per hour, all-day off-street parking immediately became less expensive than parking on the street.

Analysis of the results showed that not only was there an increase in available spaces, but the city also experienced a decrease of almost 25 percent in the number of expired-meter tickets written. Given that the hospital's parking agency saw increases in both the numbers of all-day transient parkers and its

monthly waiting lists, it is safe to assume that many of the vehicles now parking off-street belonged to staff, which was the exact group one might argue should be parking off-street to help encourage turnover.

As part of the analysis, transaction counts from area paystations were examined as a separate data set from the financial transaction audit. This analysis allowed a methodology to be developed to determine the average usage rate of each stall at individual paystations. By 2009, the various metered locations in the downtown had been converted to paystations, allowing for the complete analysis of the transaction data. Obviously, one year's data doesn't present enough information to influence discussion, so an additional year of data was gathered and analyzed before recommendations to the city council were prepared.

Beginning with 2010 data, transactions were ana-

lyzed for each month to provide greater accuracy and to adjust for construction or other reasons for parking being temporarily unavailable. Seasonal fluctuations were also identified; as one example, for two weeks every July, one of North America's largest and more successful Fringe theatre festivals makes some of the municipality's high-demand streets unavailable for parking.

### Community Involvement

In beginning the discussion of increasing meter rates, the WPA partnered with local business improvement zone (BIZ) groups to engage potentially affected stakeholders. These consultations included discussions with not only businesses in the proposed increased rate area, but also downtown residents. Of course, data is nothing more than a series of numbers if not presented correctly. Important to the discussion was the use of maps to demonstrate where areas of high demand were and to show the increase in demand on a year-over-year basis. Using parking demand data to demonstrate that there are more people coming downtown tends to gain the interest of BIZ groups.

An interesting side benefit of mapping the high demand areas was the ability to identify specific drivers of parking demand and a concrete example to put to rest the claim that a parking meter will drive customers away from a business. In one case, a store that provided customer parking was located in an area where demand was approximately 50 percent for about three blocks in every direction except for the on-street



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parking immediately in front of the door, which was at 87 percent. This was not the only example where the metered spaces in front of a business were in high demand, but was the most striking example of the fact that customers will come to a store when there are products they want regardless of whether or not there are parking meters.

For any municipal parking agency about to embark on a discussion of increasing meter rates as a means of increasing turnover, determining demand and proactively engaging stakeholders in a discussion as part of the process goes a long way to addressing potential claims that a rate increase is a cash grab. **P**

**Making Adjustments**

In July 2012, the Winnipeg City Council approved the creation of high demand zones in downtown and authorized the WPA to adjust meter rates based on demand to achieve as close to 85 percent occupancy as possible. Implementation of the new rates was scheduled to begin in the fall.

By focusing on the reason for meters and the need for turnover, the discussion stayed about ways to increase turnover rather than the rate increase itself. By the time the proposal was brought before the council for approval in early 2012, the efforts of the WPA to consult and facilitate discussion had generated two favorable editorials in the *Winnipeg Free Press* that supported both the use of increased rates to generate turnover and the way the WPA determined the areas for increased rates.

Going forward, the WPA intends to conduct more detailed analyses to determine such things as the highest-demand times of day, week, or month and the average length of time purchased. While the adjustment of on-street rates on anything beyond an annual or bi-annual basis is unlikely to be implemented simply due to cost (the same cold weather that affects demand on a seasonal basis limits the ability to remotely adjust the programming at meters), the data can help with adjusting parking enforcement patrol deployment decisions and be of use in discussions relating to additional downtown development.

With demand-based pricing models becoming more prevalent, the methodology developed by the WPA can be used for multiple on-street parking solutions, including single space, pay-and-display, and pay-by-plate as long as the transaction counts are available.



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