

significant investment is pouring into the City of Denver. Against this backdrop, the role of parking is growing in prominence. Without any plans for additional parking spaces, the influx of people and demand underscored the need for more strategic and efficient management of the City's limited parking assets. Prior to 2007, parking in Denver was governed by a mix of mechanical, coin-only, single-space parking meters and multi-space parking kiosks. As the City began to evolve and grow, so too did its parking needs. The City looked to parking technology vendor IPS Group, a relatively young company at the time, to modernize its outdated technology with new, state-of-the-art smart meters which were capable of accepting multiple forms of payment. The solar powered meters were wirelessly networked to a webbased Data Management System that provided real-time data on revenue, meter health, and occupancy. "We went with IPS because of the possibilities—the possibility to pay with additional forms of payment, the possibility to configure the meters remotely, and the possibility to use the meters and back-end system in ways we haven't even conceived of yet," states Bill Miles, Manager for Right of Way Enforcement & Meter Operations with the City and County of Denver.

Single-Space Replaces Outdated Technology

Initially, the IPS single-space meters were installed in the downtown area in combination with the existing multi-space kiosks. The public reaction was overwhelmingly positive. Customers liked the ability to pay with their credit card paired with the convenience of a single-space solution. The IPS single-space meters eliminated the need to wait in line at a kiosk and then walk back to place the receipt on the dashboard.

Despite the City's concerns that revenue may decrease, local business owners requested that IPS single-space meters replace the pay-and-display kiosks in the upscale Cherry Creek shopping district as well. With the aim of increasing customer convenience, the City agreed to replace a test percentage of the Cherry Creek kiosks with IPS single-space meters. Not only did revenue increase by 20%, the public clearly preferred the single-space solution. Just eight months after the initial test installation, all kiosks in the Cherry Creek shopping district were replaced with IPS single-space meters.

The new meters proved more convenient than the multi-space kiosks and offered features that no other vendor could provide at that time, such as payment by credit or smart card and



a large meter screen which could display information right on the meter, eliminating the need for signage and stickers. The meters were wirelessly networked to a web-based Data Management System that provided the City with real-time data and a level of insight into customer behavior and trends, occupancy, meter health, and collections that had never before been available. Management System data demonstrated increased revenue associated with the IPS meters, which ultimately justified the deployment of additional meters.

In addition, Management System data helped make parking rates consistent with demand across the City and County of Denver. Prior to the IPS smart meters, parking rates varied by area. After introducing the new meters, the City was able to identify high-demand areas and raise rates accordingly, or remove time limits in low-demand regions. "The ability to be agile is what I like about the system. Parking management is not strictly about increasing revenue. Good management takes into account the customer as well, and the IPS system allows us to do both," states Tina Scardina, Director of Right of Way Enforcement.

Ongoing Support

While efficient technology was popular with motorists and business owners, the City valued the level of support provided by IPS. "We needed more than just a product, we needed support," recalls Lena Price, Operations Supervisor of Right of Way Enforcement & Meter Operations for the City and County of Denver. "IPS and the City of Denver have grown together and we are honored to have been a part of that evolution." The City provided instrumental feedback and insight that helped IPS Group fine-tune the Data Management System to reflect the real needs of municipalities.

Giving Back to the Local Community

The meters are being put to good use, facilitating donations to end homelessness in Denver through the City's "Road Home" program. Through this program, citizens can make a donation either by coin or credit card at any of the 55 designated IPS meters throughout the City. The program, which has been in place for six years, has funded two facilities that house up to 75 homeless individuals each. In addition, funds raised through the program go to an annual Thanksgiving dinner which feeds more than 3,000 each year.

Looking to the Future

Capitalizing on the successful deployment of IPS single-space meters, the City of Denver plans to continue to use technology to help maximize its scarce parking resources, while enhancing the parking experience in Denver. Cindy Patton, Principal City Planner Parking Operations states, "Working with IPS has been an extremely rewarding experience for the City of Denver. Looking to the future, we will continue to explore what technology can offer us in partnership with IPS and with our constituents, to ensure we are getting the maximum value out of each and every parking space to the best of our ability."



Highlights:

- Overwhelming public support for the new meters – business owners in the Cherry Creek shopping district requested the old kiosks be replaced with new IPS smart meters and parking revenue increased 20%.
- Greater than 99% meter uptime throughout the system.
- Remote management capabilities and real-time data via web-based Data Management System.
- Instrumental in CSR initiatives.
 IPS meters facilitate donations for Denver's successful "Road Home" program.





ABOUT IPS GROUP, INC.

IPS Group, Inc. is headquartered in San Diego, CA (USA), with offices in Canada, the Netherlands, and Italy (www.ipsgroupinc.com). IPS is a design, engineering, and manufacturing company focused on low-power wireless telecommunications, payment processing systems, and parking technologies and has been delivering world-class solutions to the telecommunications and parking industries for over 20 years. The company offers a PROVEN product suite, composed of multi-space pay stations, pay station upgrade kits, single-space meters, vehicle detection sensors, smart cash collection systems, webbased reporting, and remote management software with advanced data analytics. IPS delivers the Internet of Things (IoT) and Intelligent Parking Systems to transportation and parking operations all over the world.

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