Parking's Technology Revolution: A wide array of new parking equipment has made parking more manageable and profitable for owners

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In recent years the parking industry has been transformed by the introduction of many new technologies that improve customer service and make parking assets more manageable and profitable. The industry is also in the midst of a wave of groundbreaking new technologies designed to integrate parking assets into "smart cities," self-driving vehicles, and other innovations that will change the way we live.

"A revolution in technology during the past decade has transformed the industry in many exciting ways," explains Shawn Conrad, CEO of the International Parking Institute, an association of parking professionals. "Most significant is having real-time data to drive smart decisions, the ability to make parking a great deal more customer-service oriented, and the newfound ways we can contribute to the bigger transportation and mobility picture."

These same technologies can provide valuable opportunities to investors. For those setting their sights on either on-street or off-street parking assets, technology should play a prominent role in the decision-making process. The presence, or lack, of technology could have a significant impact on the value of any deal.

"It's important to look at what technology is currently in place," says Dan Kupferman, director of car park management systems for Walker Parking Consultants. "Every deal that has gone through in recent years has been heavily impacted by technology."

Kupferman says that when investors purchase parking assets, particularly parking facilities, one of their first moves is often to install automated revenue control technology, such as pay-on-foot or access and revenue control equipment that can accept credit cards. By automating their facilities, owners can save tens or even hundreds of thousands of dollars a year by reducing or eliminating staffing costs, making operations more efficient, and eliminating the risk of employee theft (a major concern for any cash-based business such as parking).

Similarly, Kupferman says that technology should play an important role in determining whether to partner with cities to lease on-street metered spaces from a city. Smart meters that accept credit cards can dramatically enhance the value of an investment in on-street parking assets.

It may seem counterintuitive, but Kupferman recommends favoring assets that do not have technology installed already.

"It's a plus if the technology hasn't been installed or updated recently," says Kupferman. "These technologies are big revenue enhancers, and if they aren't already installed or if existing equipment is outdated, there's a much higher potential for growth. It gives the investor an opportunity to dramatically raise the asset's profitability with a simple technological enhancement."

Parking technologies themselves also offer investment opportunities. Kupferman says that he sees a lot of investment money going into apps that allow parkers to reserve spaces, pay for parking, or identify where parking is available. But he warns investors to be cautious.

"There are so many app providers that the marketplace can't support them all," says Kupferman. "Look for app providers that already have market share. The worst case for investors is that these established companies may be acquired, but they probably won't go out of business."

Kupferman goes on to recommend seeking out apps with national reach, rather than those associated with particular hardware providers.

"Moving forward, the most successful apps will work with a variety of different types of equipment," says Kupferman. "That way people can use their apps as they travel out of town — even across the country."

Gorm Tuxen, president of IPsens LLC, agrees that flexibility will be the key to success in the future.

"The problem you've traditionally had with parking technology is that it has been tied to individual equipment," says Tuxen. "So, if you purchased access and revenue control equipment from a particular provider, for instance, you were tied to that manufacturer's software. Many parking owners found that the equipment they purchased with a lot of bells and whistles didn't work as well as it should have because the associated software wasn't very good."

According to Tuxen, open-source software will be the way of the future.

"Independent developers are already introducing software that can make existing hardware work more effectively," says Tuxen, "and this trend is only going to grow. Parking owners want tools that will make their parking assets more profitable, and the technology providers who make access and revenue control equipment, parking guidance tools, and other types of hardware are starting to realize that it makes sense to open up their equipment to innovative software developers."

The industry is just at the beginning of the movement toward open-source development, and Tuxen thinks that makes this the perfect time to look for these opportunities.

"Every investor wants to get in on the next big thing," says Tuxen. "When it comes to parking, open-source technology is the next big thing."

There are also opportunities in hardware, but even that part of the parking technology landscape is changing. Over the past 20 years a wide array of different types of parking equipment has been introduced — from pay-on-foot equipment to access and revenue control equipment to parking guidance. These tools have made parking more manageable and profitable for owners, and many have also made parking more user-friendly.

According to Seth Shurtleff, vice president client relations and business development for Sentry Control Systems, the trend of introducing new technologies continues today, but with an interesting twist. Today, the order of the day is to support an ecosystem around the car park technology that will support multiple integrations. As with software, in today's industry, different types of hardware need to be able to work together.

"Today there are too many different types of parking equipment for them not to work together," says Shurtleff. "A single structure may have access and revenue control equipment, parking guidance, and license plate recognition, not to mention reservation software and payment apps. It would be a nightmare for owners to have to operate these tools independent of each other."

The rise of frictionless parking has made operational integration that much more important. Frictionless parking revolves around the idea of letting people in and out of parking structures without having to stop to pay on the way out. The systems rely on a variety of different technologies, including barcode readers, RFID technology, mag strip readers, and license plate recognition (LPR) equipment to recognize parkers' credentials to permit entry and egress.

Last year, the largest private parking technology project in the industry's history was undertaken for a leading resort company. The $90 million initiative, which permits the management of 60,000 spaces in a single city, demonstrates the promise offered by combining complementary technologies to create frictionless parking. The equipment features state-of-the-art barcode readers, RFID technology, and mag strip readers that can read hotel room keys, employee badges, drivers licenses, military IDs, mobile phone apps, Bluetooth Low Energy (BLE), and tickets to special events to admit vehicles and direct drivers to appropriate parking areas. The readers can also recognize the company's proprietary loyalty program cards to admit members for free parking.

Upon entering a garage at one of the company's properties, license plate recognition equipment records the driver's vehicle information, associating that vehicle with the driver's credential. When the driver is ready to leave the garage, the license plate recognition system recognizes the vehicle license plate, and if the parking fee is satisfied, the gate will open for the customer to exit.

What does this trend mean for investors? Companies with technologies that work with other types of technologies should provide a better return to investors.

Parking is a $100 billion industry, and it presents numerous opportunities for investors who understand the landscape and the trends that will drive the industry over the next decade. The industry's technology sector is leading the way, both in terms of introducing innovation and providing opportunities to investors.

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