AT A CROSSROADS

Parking industry leaders share their thoughts on where the industry has been and where it's going, in and beyond the new year.

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There's no question that the parking industry has seen massive change in recent years. Technology, sustainability, and a growing perception of professionalism have all deeply affected the way people in parking think about their work. But what's ahead for the future? We asked industry leaders who work in airports, universities, technology, commercial parking, and international markets what they thought.

The Parking Professional: **What's your general impression of where the industry is now and where it's going over the next five to 10 years?**

David Cummins, senior vice president and managing director, parking, Xerox: Focusing on onstreet parking, over the last five years, we've probably made more progress in the industry than in the last 30 years combined in terms of technology. We're on a fast clip in new technology innovations and I think it will continue. We've seen the advent of the multi-space meter, the single-space credit card accepting meters, pay-by-cell, and sensors in spaces. The next wave of technological innovation is going to be in software. There are a lot of devices in the field that need to be managed. Back-end software will be needed to pull together those disparate units into one platform.

We'll also see more software for handheld devices and smartphones. Relatedly, there will be a recognition that the data collected needs to be stored. Generally now, after we figure out how much revenue is collected and what violation counts are, that data goes into the ether.

If people store it, it's not mined in any way.

I can see in the next two to three years, maybe longer, a movement toward a more account-based parking system. We have that today with pay-by-cell, but other transactions are anonymous. It'll be natural to move towards an account-based system, and our expectation for the future is that parking will work much like utilities do today. You park where you want and then get a bill from the city: you parked this many times, the rate is this.

Tiago Farias, professor, IDMEC-ISC, Portugal: I would list three major challenges where we are today:

1. The perception by others of the role of parking (namely how do city planners, legislators, residents, visitors, commuters, and the population in general see our industry). There is still a negative and misunderstood opinion of why we exist and how we operate and how important our mission is in guaranteeing more sustainable and efficient mobility in a city.

2. Low integration with other major contributors to mobility management. In fact, the parking industry is still an outsider from the remaining players of urban

mobility. That is one key issue that needs to be overcome if we want to be seen as positive contributors to more sustainable management of urban traffic. While public transportation or soft modes (biking and walking) are seen as green, attractive products to cities, parking is still seen as the enemy that controls, enforces, charges, and punishes. It's important to start integrating parking as part of a general message.

3. Lack of compatibility between technologies. Each technology provider (from pay-and-display machines, to contactless cards and managing software platforms) tends to have its own closed services and products, and there is difficulty integrating solutions with other complimentary services. This is a problem that is also present in other industries, but parking will suffer from it during the next decade as clients look for more information in real time combined with other relevant data.

Dorothy Harris, assistant deputy manager of aviation/landside services, Denver International Airport: Airport parking has, in the last 10 years, investigated the use of a variety of technologies that do not require the use of parking tickets or customer contact. Instead, they use a more hands-free approach (paperless transaction), which will lower operating costs and increase customer satisfaction. More airport parking facilities are looking for ways to cut costs to their operations and add value to the overall parking experience by bringing in different types of services; for example, car wash and detailing, dry cleaning services, windshield repairs, etc.

The airport parking industry has begun to increase offerings of non-traditional services to their business clientele who often fly out two or three time a week, and the occasional parker. This trend will continue over the next 10 years.

Casey Jones, CAPP, director of transportation & parking, Boise State University; chairman of IPI's board of directors: I see a revolution taking place in terms of how we see ourselves as an industry. We are now firmly a service industry, and that is a fundamental change from where we came. Over the next 10 years, I believe this trend will continue and will play out in the way we market our services, the relationships we build with others, and the technology we use. It's an exciting time to be a part of this industry and the future is bright.

James Wilhelm, president and CEO, Standard Parking: It's my impression that our industry has changed significantly over the past 10 years by virtue of the demands placed on those of us responsible for the

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management of institutional and municipal real estate.

The continuous growth of medical, university, and airport campuses certainly demands more complex solutions than in past periods, where land wasn't valued with the same premium it has today. More than ever , the access for and storage of vehicles entering and exiting these campuses require a more detailed focus from an overall planning standpoint to minimize congestion, maximize capacity, be environmentally sensitive, and maximize the real estate asset value through revenue collection. Having knowledgeable, experienced professionals working in a true partnership with the client, both public and private, is critical to achieve the most viable solution. The talent required to develop these solutions continues to evolve, and I believe the entities that harness and deploy that talent will be the most successful.

The municipal market specifically has changed dramatically by virtue of an ever-increasing shift to privatization, whether in outright asset sales or management partnerships. The pressures of fiscal demands upon elected officials have resulted in a requirement for more efficient revenue generation, compounded in the case of campuses by the congestion, capacity, and environmental issues I've already mentioned within the vitality of the associated central business districts (CBDs). These considerations are almost always in conflict, and creating the right balance in public and private CBD access will directly impact the continued vitality of many urban centers. Again, an appropriate public/private partnership is essential to success, and while our industry has been developing the appropriate talent and ideas over the past 10 years, the process remains in a relatively early stage given the immediacy of the pressures. Smart leadership that understands these related pressures will be able to succeed, while those that don't will face extreme challenges and potential fiscal insolvencies.

TPP: **What do you think are the biggest two or three contributors to the industry's progress in recent years?**

David Cummins: The multi-space meter and then the credit card-accepting single-space meter. Pay-by-cell has the potential to be a game-changer as well.

Tiago Farias: The biggest contributor was the introduction of information and communications technology (ICT) in our services. In my opinion, ICTs are now the most effective and powerful tool available in our industry. While GPS-based navigation systems are now standard, we need to be able to transform our

services to fully web-based services where payments, information, registration, and reservations are solved on the web. And while today people are fully connected to the web, I believe in 10 years cars will be as well (not only the people in the car, but the car itself). We need to be sure that when that happens, parking will be a key service available in those ICT products.

Dorothy Harris: Technology and customer feedback, thanks to the industry asking for it through things such as surveys.

Casey Jones, CAPP: First, I think is the realization that we are not just about parking cars. We are a service industry focused on access management. This change in mindset has opened doors for the industry to play a much greater roll in economic and community development and at universities and colleges around the globe. There has been a sea change that has taken place from selling a parking space to helping people access their destinations and improve their experiences. We have also introduced many new technologies. With those, we are improving the customer experience, reducing our costs, and understanding our customers. Finally, and through the concerted effort of IPI, our industry is fast becoming recognized as a profession. Community leaders, planners, and architects are realizing that they can't achieve their goals without having a parking professional at the table.

James Wilhelm: Certainly the continued consolidation of private parking and transportation operators has contributed significantly to the assembly of the talent pool I've mentioned. The ability to deploy teams of trained and experienced professionals across North America to solve individual client challenges enables asset creation that isn't financially viable for smaller firms.

Without trying to sound patronizing, the advancement of the IPI has created a terrific forum for the industry to come together. Instead of being a passive, convention-driven opportunity that so-called parking consultants use to seek to elevate their status, I think today's IPI enables real public and parking operators, suppliers, and institutional and municipal leadership to collaborate on a 365-day basis. The sharing of real experiences, successes, and challenges has created a wonderful opportunity that leads to true contractual partnerships, where talent is allowed to succeed and flourish with very defined roles between managers, outsourcers, and suppliers.

Lastly, the entry of private equity infrastructure investment funds has created a game-changing opportunity for the institutional and municipal markets. The opportunity to monetize an asset via a long-term lease or sale can potentially allow real estate managers to focus and invest in their primary mission (healthcare, education, air travel, responder services, and the like) while no longer needing to manage tertiary functions in which their expertise is limited. Again, where implemented with the correct mix of a public/private partnership, a win/win result can occur. Where misguided, a one-time opportunity can produce horrible results.

TPP: There's a lot of talk about technology in the parking industry. Which technology or technologies do you think will have the biggest effect on the way parking professionals do their jobs in the coming years?

David Cummins: I think it's going to be the back-end software. Parking professionals' jobs have become increasingly complicated, and each of the different technology providers—the meter, the ticket processor, the sensor provider, the booting provider, the pay-by-cell provider—has its own back end to generate reports. The technical demands are becoming unreasonable. Parking professionals need the ability to integrate these devices and technologies in the field into a common software platform that's real-time. That will be the next evolution.

Tiago Farias: We will need to be able to explore the maximum potential of ICT based on our mobile phones, iPads, tablets and, in the long run, our connected cars. Technology should also be able to improve the efficiency of on-street parking enforcement, which is still very human intensive. We will also need to use technology to communicate more with our clients.

Dorothy Harris: Complete automation of parking facilities will change the way we work. We will be able to manage our facilities and optimize our revenue stream through the use of statistical reporting, which, in most airports, is not available. European airports have adopted automation more quickly with online reservation systems, phone applications, sophisticated count systems, etc.

Casey Jones, CAPP: Generally, the technologies that help us collect and analyze data about parker behavior and those that improve the experience of the customer have the greatest impact. Until recently, my guess is that ours has been an industry almost completely void of meaningful information about the customers we serve. And no business can thrive on gut instinct alone. Today, we can capture real-time parker behavior so we can make the most efficient use of our parking facilities. Also, we've pulled in technologies from other industries which has gone a long way in helping our patrons have

a better, more enjoyable parking experience. From accessing live parking availability information to reserving and paying for parking via smart device, we're making the entire parking experience much more convenient.

James Wilhelm: I laugh a little bit with this one. There has been talk about technology advancement for each of my 35 years in the institutional and private sector. The advancement from cigar boxes for revenue collection and manual lot counts for inventory control, to sequentially numbered parking tickets, non-resettable gear-driven meters, in-pavement loop counts, ticket issuing machines, fee computers, key cards, RFID hangtags, pay-on-foot stations, and on and on and on, is demonstrably reflective of an industry that goes though constant, remarkable change.

This change will continue to occur on an exponential basis as the technology becomes more enabling. I think the most significant opportunities for parking professionals in the near term will be in the area of data analytics, which will be more readily available to help us make smarter decisions about capacity and revenue maximization while reducing operating costs.

For example, we now have the ability to enable those seeking access to our campuses and CBDs to select, reserve, and pay for access in advance, online, and we can guide the end users every step of the way to their destinations, even changing their routes if circumstances warrant based on real-time data.

We also can deliver variable pricing in real time by use of algorithmic analysis to match predictable demand via smart peripherals. Similarly, we can manage both fixed route and on-demand transportation systems through the efficient use of wireless identification, cameras, and central control systems to manage running costs down to the minute. We can manage the access and control systems for parking and related assets for multiple and entire campuses from thousands of miles away through efficient web and wired deployment, resulting in a significant reduction in operating costs and enhanced customer service.

I could go on and on but, as has been the case for 35 years, there is never a substitute for well-informed, analytical management decisions that technology serves up for us. The ability to intelligently and efficiently mine that data will be important to the professionals of the future.

TPP: **The industry is becoming more automated. Is that a good thing or a bad thing as it relates to customer service? How can parking profession-** als ensure customers still feel they're receiving personal service?

David Cummins: It's largely a good thing. Companies like ours focus on custom experience not for our direct customers, but their customers—the citizens and drivers. Whatever we can do to improve that customer experience makes our direct customers' lives that much easier. We're trying to take the pain out of parking. As parking becomes less of an event and instead becomes an innocuous transaction, our customers' lives become easier as well. There are elements people will have to get used to that they may not be crazy about initially. Dynamic pricing is one, and the fact that enforcement will be more automated is another. That won't be popular with people who are used to getting away with violations. But for people who are compliant and pay for parking, this technology is a dramatic improvement.

Tiago Farias: I am certain that in a decade, many services that we use on a daily basis will be fully automated. From smart metering for home energy all the way to the smart city concept, clients will become used to a concept where human contact is almost virtual. Making our business more automated will be inevitable and once again, if well integrated with other services, will provide a fantastic opportunity to move in the right direction. As long as information is available in real time, methods of payment will become more easy to use, so the automation of parking will be very beneficial. It will take time and cost and requires integration. Not an easy task, and a very interesting challenge taking into account the variety of solution supplied by the main manufactures that are not capable of talking to each other.

Dorothy Harris: We don't believe it's either good or bad. Most customers want a seamless transaction and are in a hurry nine times out of 10, which generally describes the business traveler. As long as there is an avenue for customers to communicate easily if there are any questions or issues, they are very happy with the service received regardless of the extent of automation.

Casey Jones, CAPP: We are first and foremost a people business. All the technology in the world will not replace the people behind our industry and we can't lose touch with our customers through automation, but technology isn't to be avoided, either. The majority of our customers can be accommodated without much personal interaction but when a problem, challenge, or special accommodation needs to be made, we must be readily accessible and responsive. An organization's customer service mark is not made when no problems exist. It is how we handle a bad experience or compli-

cated request that our customer service mettle is most apparent. We can't take care of people unless we do so person-to-person.

James Wilhelm: We have automated hundreds of parking systems and transportation routes over the past decade, and the key to taking advantage of the efficiencies generated is offering improved customer service on a parallel path. Whether the customer solution is video screens instead of just speakers at the robots deployed for customer interface purposes, static or changeable messaging and graphics, smart deployment of a mobile customer service staff, or websites that create a seamless customer interactive experience, the key to successful integration is based on three key components: First, you need an experienced personnel team that has deployed or managed the technology that serves as the solution to the challenge. Second, scale enables us to provide a flexible, well-trained customer service staff across multiple venues. Third, scale also allows us to invest in the infrastructure required to house the remote monitoring centers, servers, firmware, online staff, and web tools that enable a multi-asset managed network of parking and transportation assets.

TPP: **What can the industry do (as individuals and as a whole through IPI) to secure a seat at the table with planners, designers, and builders of cities and downtowns?**

David Cummins: I think it's generally recognized that parking provides a significant revenue stream for cities and counties. The challenge is that there are often expectations that money will come in, but there's no desire to give parking a seat at the table. It's becoming more apparent to cities that parking is integral for the operation of the city. Congestion, the streetscape, the emission profile—all of that is inter-related. As smart parking technologies are used and capture more and more data, there will be a greater understanding of exactly how that revenue flows in and it will become more clear to city managers that they need to have an integrated transportation plan. Parking will be a critical element of that. It's a lever they can actually pull. The ability to raise or lower the number of parking spaces, change hours of operation, or change how enforcement is done have a demonstrable effect on traffic. There's not much you can do to pull a lever on traffic, but parking is one place you can do that.

Tiago Farias: Participate as actively as possible in the development of the current and next generation of solutions that will manage and interact with the users of parking. That is a tremendous task, as it involves working together not only with city planners and designers, but also with public transport authorities and major players. IPI could have a crucial role in this task.

Dorothy Harris: Continue to develop productive relationships with our co-workers to show them the value we bring to their projects. It is also essential that we not only tell everyone that *Parking Matters®*, but we also show them by providing solutions at every opportunity. Many times, planners and engineers find themselves reconstructing projects when everyone is not at the table, which makes for costly projects.

Casey Jones, CAPP: We need to be active, involved, and visible. We need to build relationships with planners, designers, and builders so we can overcome any negative perceptions that might be out there about the role of parking and ours as a profession. We need to illustrate through our good work that ours is a complicated and demanding profession and that our perspective, experience, and capabilities are critical to their success as well as that of the cities, universities, and developments they represent.

James Wilhelm: This is a terrific question. Often times, a short-term fad identified by elected officials or developers can rob an asset of its viability over the longer term. I'm not sure how this might be overcome other than a constant effort by the IPI and its members to create an awareness across the spectrum of decision makers. Of course, the best way to achieve this is through participation in local and national organizations where an awareness of the solutions that parking and transportation experts use can be considered. Tactical lobbying is an opportunity as well, though our industry remains quite disjointed from a leadership perspective.

TPP: **We've heard a lot about going green. What do you see as the best ways for parking facilities to do that? How important is it?**

David Cummins: Parking definitely affects, positively and negatively, congestion. It's obviously a big contributor to the carbon footprint of a city. We can use dynamic pricing to raise or lower demand in different areas. We can push people to seek out alternative modes of transportation and bike or take a bus or train. Those are noble goals. I think the advent of new technologies are making these things possible. The use of solar will help, and as we move towards a world without meters, that will help. Parking professionals will embrace that they have environmental stewardship as part of their job descriptions.

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Tiago Farias: Going green is a solid way of making our industry more attractive to all while producing better infrastructures. But let's be reasonable: the environmental footprint of our parking facilities, as compared to other neighboring buildings and services, is low. Nevertheless, all sustainable efforts that contribute to greening our business should be encouraged, such as efficient lighting, automated payment processes, renewable energies, or promoting parking for electric vehicles.

Dorothy Harris: We are always looking at research regarding green technologies and methodologies. In 2012, we added hybrid parking spaces in all of our facilities and they have been well received and highly used. Other areas we are researching and considering are green lighting, wayfinding systems, and charging stations. The return on investment for these technologies is getting better each year. As costs come down and benefits get higher, we will move forward with these green initiatives.

Casey Jones, CAPP: Sustainability may be the most important issue we face in the coming years and decades, but being green is only one dimension of sustainability. To be truly sustainable, one must simultaneously balance environmental, social, and economic needs. Parking enterprises open to the idea that being sustainable can (and likely will) result in profitability will be positioned to do well. Parking professionals who make and sell the connection between convenience and sustainability are also likely to do well. Consumers want sustainable choices, but they rarely make a purchase decision based on sustainability alone. When a sustainable product or service is superior in all ways other than being green, consumers are likely to make the switch and reward the business that has made sustainability a key element of their DNA.

James Wilhelm: Obviously, we have a responsibility as leaders and inhabitants of the planet to participate in available environmental solutions. We have been involved in the development of parking facilities that have been recognized for their green focus, as well as with a strong focus on retrofitting parking facilities to achieve environmentally-intelligent objectives. We operate transportation systems with an eye to proper fueling and efficient routing. Smart lighting, solar and wind product deployment, and smart access technology are just a few examples of the tools we use. As importantly, we train our professionals through our Standard University® online learning system, in the awareness and practical deployment of existing and in-development solutions we can recommend to our clients.

The elephant in the room is the provision of charging stations across our locations. This deployment, from a commercial and capacity management perspective, must allow for the maximum use of available real estate square footage consistent with real demand. Any space that's dedicated solely to charging stations must be in line with the actual demand for that space to avoid some of the real estate mistakes made in the past simply by bowing to popular mandates. My dream would be for all parking spaces to be equipped with charging stations in the future so long as the technology allows for a reasonable, matched deployment of attractive and practical alternatively powered modes of personal and public vehicles.

Frankly, as a private citizen, I still need to be convinced of the net carbon footprint impact of alternative vehicles when considered in light of the electricity being generated to power them. I believe we'll need to get further along with the cost/benefit/footprint/practicality matrix before wider real estate allowance for these devices becomes evident.

TPP: **What changes do you think the parking industry will see in the next decade? How can professionals prepare for those changes now?**

David Cummins: As much as we complain about a lack of parking spaces now, it's going to get worse. As more cities want to become walkable and push transportation in lieu of driving, we're going to see city policies in the U.S. follow more along the lines of what's happened in Europe: parking is scarcer and much more expensive. The trend is that parking, because of these political and macroeconomic dynamics, is going to become increasingly at the forefront of policy discussions.

Tiago Farias: Parking professionals will need to understand more about ICT and the types of services they will be able to provide. A wide range of issues will have to be covered, such as electronic payment methods that include better knowledge of the banking systems and regulations, innovative enforcement solutions, and web-based applications, to better inform and interact with the client.

Dorothy Harris: Parking is and has been moving towards automation for many years. In the next decade, we will see more and more facilities operating at a high level of efficiency with fewer on-site staff. It is critical for the parking professional to stay educated regarding new technologies, what technologies are working for the industry, and, even more critically, what is not working well and why it isn't working. We must be discerning enough to choose the technologies that will work for our operations and not be drawn down the wrong path by the newest and shiniest software or hardware that is being developed.

Casey Jones, CAPP: The growing demand for access services coupled with continued economic pressure will force parking professionals to expand their roles beyond the traditional paradigm—parking cars—to access management, where they'll provide shuttles, car share, bicycle, and pedestrian facilities, and provide arrangements for auto parking. When we begin to see our role as bigger and more important to solving a community, university, or development's needs, we develop a much broader perspective and offer a full range of access solutions. We can prepare for this shift by starting now. We need to invest in training in urban planning, transportation demand management, and economic and community development. We need to build relationships in our community with representatives from the public and private sectors who might have a different, more narrow and less positive view of our work. And as we gain knowledge and build bridges, we'll be best positioned to impact our communities in a positive way.

James Wilhelm: It's critical that our industry attract talent with an increasingly diverse set of skills and a willingness to collaborate. Continuing education programs, such as those offered by the IPI and others developed in-house by large employers, must be a mandate of leadership. Forums conducted by our collective industry leadership with enlightened political officials should be actively engaged. Oftentimes, speeches at conventions don't necessarily result in collaboration, and I think the parking and transportation professional should expect and receive more.

A healthy interchange of private/public talent should be encouraged. I believe our industry has been underserved in the past in the sense that frequently the most capable leadership asset—the people who have actually managed parking facilities—are often under-utilized. I think job fairs and interchange platforms might better prepare our leadership of the future. Ⓟ