

FUTURE

*What is 21st
century parking?
For one thing,
very different.*

By Paul Wessel

Parking during its first 100 years evolved slowly and linearly, much like the evolution of the automobile in the same time period. It was all about the car and the space. The next 100 years will be as different as the computer on which I am now writing from the typewriter on which I learned how to type.

The first 10 items in a Google search of “the future of parking” as I write in mid-October give us a hint of what lies ahead:

1. *Road & Track's* “A Big Makeover Is Coming to the Parking Garage of the Future Thanks to Autonomy” concludes that autonomous vehicles will usher in, community by community, a human-centered approach to planning and development.
2. Urbanization, self-driving cars, and ride-hailing services (e.g., Uber) drives *Mother Jones* to envision a “low-parking” future in “No Parking Here.”
3. No. 3 was a repeat of No. 1.
4. *Governing* magazine posits that the shift to ride-hailing services might “be the end of parking requirements as we know them.”
5. *The Parking Professional's* “The Future of Parking Policies” summarizes a report for the Dutch government about how parking policies need to recognize parking’s role as the connector between mobility and place (see the August 2014 issue).
6. Tim Haahs’ *The Parking Professional* piece, “The Future of Parking Design,” lays out the evolution of parking design’s focus from utilitarian storage, to safety and security, to facades, to, ultimately, comfort and sustainability (see the October 2013 issue).
7. Self-driving cars, the internet of things, smart cities, millennials, and data analytics will be the “5 Trends Driving the Future of Parking,” predicts T2, a parking management technology firm.
8. In “Denver developers have seen the future of parking, and it is no parking at all,” *The Denver Post* describes how that city’s parking garages are currently being built with extra floor height, flat plates, and removable ramps to allow for future adaptive reuse.
9. Luxe’s virtual valet app is the focus of a *Business Insider* piece.
10. An *Education Business* (“Business information for decision makers in primary and secondary education”) reports on how parking policy and technology changes are playing out in Great Britain.



I expected autonomous vehicles, apps, public policy, and Uber all to be part of what I found. But parking coverage in *Road & Track*? In *Mother Jones*? In an IT magazine for schools? Construction now anticipating non-parking use in the future? I was impressed how rapidly the parking discussion is broadening. (After you read this piece, try Googling it for yourself and see how the discussion has moved even further.)

As my Google search indicated, 21st century parking will unquestionably be as different from its past as the wall phone in my kitchen is from the smartphone in my pocket. No longer will parking facilities and operations be stand-alone, single-function entities. Like my smartphone, parking structures will become a platform for, and part of a web of, ever-evolving and self-updating mobility choices.

The Potential

The garage might fuel my owned or shared car or even offer me the option to join a coworker heading home in the same direction as me. It might house someone in the C-suite's \$8,000 Trek Madone bike or her Tesla. Maybe it will rebate my coworker for not parking in it or offer him a convertible on Saturday and a van on Sunday. It might even be a virtual garage, guaranteeing us spaces in nearby facilities with excess capacity. Parking operations will

grow increasingly entwined with the car, the building, and a web of transportation options to mature into something like, in SP+ words, "access management."

As personal mobility choices evolve, so too will the markets around them. As Navigant Research explains, "By 2050, perhaps the only element of personal mobility common to the turn of this century will be the act of moving around in self-contained vehicles on wheels. ... Many of today's businesses will be gone, but new ones will emerge and current players will evolve to stay relevant—and profitable—in this new transportation environment."¹

For those of us inclined to see triple bottom line opportunities, this is a wonderfully fertile moment for parking. As we enjoy the benefits of innovation, investors, tenants, local governments, and communities are starting to focus on how buildings and transportation affect the health and well-being of individuals and the world around them. As nations move forward to implement climate change agreements, tracking and reducing carbon emissions will become a growing demand on our access management work. Because nearly a quarter of the world's carbon dioxide (CO₂) emissions are caused by transportation,² and because cars, trucks, and airplanes now emit more CO₂ than America's power plants do, the new transportation environment predicted by Navigant

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will, of necessity, reward businesses that incorporate people, planet, and profit into their business models.

Parking's Role

Not surprisingly, “decarbonizing” transportation will entail green parking strategies familiar to many parking and transportation professionals. Alternative-fuel vehicles, smart growth, shared mobility services, transit, market-based pricing, bike and pedestrian infrastructure, real-time information, and autonomous vehicles are all key drivers.³ The road map laid out in IPI’s Sustainability Framework and the Green Parking Council’s Green Garage Certification (now Parksmart) meshes perfectly with global sustainable transportation goals.

Our capacity to help enterprises realize this triple bottom line was dramatically enhanced with this year’s integration of the green parking movement into the U.S. Green Building Council’s (USGBC’s) growing family of programs that advance spaces that are better for the environment and healthier for us to live, work, and play.

In a relatively short span of time of our work with the USGBC, the sustainability managers of real estate organizations, universities, and cities have begun unprecedented discussions with their parking and transportation peers; parking assets and operations are now on building owners’ sustainability agendas. In addition, architects, engineers, and construction firms long engaged in LEED building certification are adding Parksmart to their client offerings. (Indeed, a number of these firms express relief that they now have something to offer their clients who were seeking LEED certification for their parking structures.)

Parksmart

Parksmart, the rating system that defines, measures, and recognizes high-performing, sustainable garages, joins the USGBC at a time when its focus and that of the suite of certification and credential offerings by the Green Business Certification Inc. (GBCI) is emphasizing the performance of systems in the built environment. So at the same time the parking and transportation industries

are gaining access to and incorporating data into their operations (and as new business ventures emerge making that data actionable), Parksmart, LEED, and other sustainability certifications are harnessing this data to offer benchmarking and continuous improvement tools supporting triple bottom-line performance.

In the coming months, the USGBC will roll out a state of the art platform—arc—that will allow any structure to participate and immediately start measuring performance, make improvements, and benchmark against itself. Arc is an open platform integrating current and future systems that increase performance and enable improved quality of life. It complements LEED, Parksmart, SITES (developed by landscape architects), PEER (a microgrid rating system), and other green-building rating systems, standards, protocols, and guidelines and allows buildings and spaces to connect to the built environment in a new way by comparing performance metrics and connecting them to green building strategies.

Arc reduces certification complexity, especially for existing structures. It allows building owners to take advantage of credit flexibility between certification programs. In the near future, certain Parksmart credits will also earn credit under LEED and vice versa. The rating systems will remain separate, but synergies between them will be recognized.

As a dynamic digital platform crafted by the noted design firm IDEO, arc visually reinforces behavior—for



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example, carpooling or taking mass transit—that improves a building’s performance. With arc, certification becomes more transparent, ongoing, and participatory.

For Parksmart, arc will help us and our community focus on the desired outcomes of our work in our structures, portfolios, campuses, and even entire cities: Are we using parking space and energy efficiently? Are we helping clean the air? Are we reducing congestion and commute times? Are we increasing throughput? Are we saving money? Are people satisfied? Are we increasing mobility while reducing resources consumed?

The Future

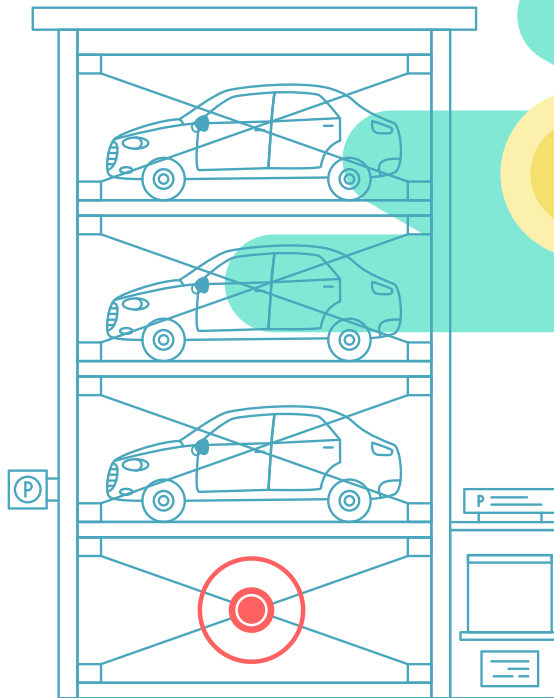
So what will 21st century parking look like? Short term, its evolution will continue accelerating and broadening. (Think about how much has changed since the introduction of the iPhone, less than 10 years ago.) By mid-century and beyond, it’s clearer what parking will do than how it will do it and who will own it. It will still be about managing assets and providing service to people moving from one place to another, but it will be more about moving people (and goods?) than about holding cars. Mobility choices will be hard-baked into it offerings. Structures will be important, but more as means the end than the end itself.

Parking will likely be accessed by “mobility as a service” or “transportation as a service” apps like the just-released Finnish app Whim (whimapp.com), Seattle’s Luum (luum.com), Los Angeles’ RideAmigos (rideamigos.com) or Xerox’ GoLA (goLAapp.com). Or maybe Google’s Sidewalk Labs’ Flow (flowmobility.io)—“Engaging cities and businesses to improve mobility with data and technology”—will capture the whole ball of wax.

Whim offers a monthly flat rate subscription (as long as you are in Finland) for unlimited transit, eight taxi trips, and five car rental days, all in one app. GoLA helped me realize that there was a 50-cent bus ride with 10-minute headways between my hotel and USGBC’s Greenbuild show at the Expo Center—and that I’d burn 32 calories walking to the bus and generate 0.1kg of CO₂ in my journey. Luum and RideAmigos are enterprise level programs, targeting employers, universities, and local governments. Sidewalk Labs talks a lot about parking as low hanging fruit in its vision of “cities built from the internet up.”

It’s too early to predict which of these apps will win out or who will own it. Will it be parking asset owner(s)? Parking operators turned access managers? The tech companies weaving it all together? Auto original equipment manufacturers morphed into mobility providers? Or will Uber or Google control it all?

Regardless of who comes out on top, Sidewalk Lab’s CEO Daniel Doctoroff (and New York City Mayor Michael Bloomberg’s former deputy for economic development) cautions us that the process will need to be guided by



our values. Shared data and moving ideas from the cloud to the curb is essential for transportation choice, but technology itself is fundamentally agnostic. When cars first replaced horse-drawn carriages on city streets, Doctoroff reminded us recently at a U.S. Department of Transportation Volpe Center talk on the future of transportation, we were not mindful of how much they would dominate our cities’ public space.

In the near future, autonomous vehicles could help us repurpose space for more people-centered communities—or they could clog our city streets while circling on autopilot to avoid paying for parking. Urbanists, technologists, and policymakers will have to find common ground on our goals and provide a foundation for the future of environmentally and economically sustainable parking and transportation to emerge. I have no doubt that people, planet, and profit will be key pillars of that foundation. And that the owners and operators of Parksmart-empowered garages will be leading the way. P

Endnotes

- 1 Navigant Research White Paper, 2Q 2016—Transportation Outlook: 2025 to 2050: How Connectivity, Autonomous Technology, On-Demand Mobility, and Vehicle Electrification Will Transform Global Passenger Transportation. <https://www.navigantresearch.com/research/transportation-outlook-2025-to-2050>.
- 2 Paris Process on Mobility and Climate (PPMC), 2015. <http://www.ppmc-transport.org/common-messages-2015/>.
- 3 A New Way Forward: Envisioning a Transportation System without Carbon Pollution. Frontier Group fact sheet. <http://frontiergroup.org/sites/default/files/Frontier%20Group%20-%20A%20New%20Way%20Forward%20Factsheet.pdf>.
- 4 Unlocking the Power of Urban Transport Systems, the New Climate Economy—2016. http://newclimateeconomy.report/2015/wp-content/uploads/2016/04/Unlocking-the-power-of-urban-transport-systems_web.pdf.
- 5 Paris Process on Mobility and Climate, 2015. <http://www.ppmc-transport.org/common-messages-2015/>.
- 6 “Denver developers have seen the future of parking, and it is no parking at all.” *The Denver Post*. <http://www.denverpost.com/2016/10/15/denver-developers-future-parking-self-driving-cars/>.



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