

THE PARKING INDUSTRY YEARBOOK 2022

Published by Get My Parking

Table of Contents

01. Foreword From Chirag	01
02. 2022: In the Rearview	04
03. Interview: Spacer Technologies	08
04. Infographic: The Rise of QR Codes	12
05. Focus: The Emergence of EVs	14
06. Focus: Making Your Car Park Eco-Friendly	19
07. Interview: Ocra	25
08. Infographic: How Far Along is the EV Revolution?	29
09. Interview: Eagle Eye Networks	32
10. The Importance of Marketing your Parking App	34
11. Conclusion: Looking Forward!	39

Welcome!

Foreword

Chirag Jain, Founder & CEO
Get My Parking



2022 has been a year of massive digital adoption across the world.

Parking in particular has seen mobile payments penetrating into the industry much faster than we ever imagined in the past few years. There is a decrease in the dependency and the resources invested towards traditional parking hardware – the adoption of digital parking methods like white label apps and mobile payments will continue to be on the rise throughout 2023.

Our portfolio shows that mobile payment penetration is up by 40-50% in gated lots and up to 100% in surface lots. We have also observed many operators getting rid of physical payment devices in their locations and converting them into fully digitized parking lots.

Apart from payments, there's also been a significant movement in the direction of electric vehicles and charging. 2021 saw the industry conceptualizing and planning out the integration of EVs - in 2022, operators began to take the first steps into integrating EV charging as an irremovable part of the parking experience. The European market continues to lead the EV charging space in parking compared to the US and other international players.



What has spurred this change is the shift in consumer expectation - with more EVs on the road than ever before, parkers want charging stations in major parking lots found in healthcare and hospitality hotspots. Consumer demand is driving installations of charging stations in the US - operators are now seeing an opportunity to provide charging as a service, creating immense new revenue potential in a completely new segment. Earlier EV charging was a question or a concept, but with the pressing need to go clean, it is now almost certain to become a critical revenue source from a parking operator's perspective.



Apart from this, the industry is also witnessing a comeback from monthly parking. It was widely speculated after the pandemic that monthlies would soon become a thing of the past, but as people return to their workplaces and restart their regular commutes, cities are going back to their normal driving and parking patterns - bringing back the need for permits.

Monthlies might come back in a digitized form - we've been seeing a lot of interest towards customizable Flexipasses or Flexipermits. Many operators are using the comeback as an opportunity to rehaul their monthly parking management systems, offering more than just monthly parking. With Flexipermits, parkers can have daily, weekly or even hourly permits. Since it's all digital, it's easier for them to customize and purchase their permits online.

We've finally launched the Autonomous Valet Parking project in collaboration with Mercedes in Stuttgart, Germany. This project has been in the making for the past couple of years. Now that we have cleared all approvals, it is officially commercially live!

We continue to see a lot of new integrations and innovations related to parking, especially in the fields of autonomous parking and EV charging. There's increased interest from all automakers towards a deeper integration with parking assets, which is in line with their need for parking to be compatible with the new vehicles that will soon be popular in the market. It also looks at a future where cars can directly talk to the parking infrastructure without involving human intervention.

In all, we see that 2022 was a year of coming back to normal. 2023 will be a year where digital adoption will surpass whatever we have seen in the past.





2022 has been an interesting year for the parking industry - the effects of the pandemic are ebbing away and parkers are slowly but steadily returning to their old patterns and commutes. Parking lots near busy areas are once again brimming with life - people are less scared of infection these days, although studies show that some are still reluctant to use crowded buses and trains, fearing infection.

This fear of public transport has led to a large number of privately owned vehicles hitting the road, all of which would need good parking spots to rest. This predictable influx of personal vehicles on the roads at the loss of public transit is great news for the parking industry in terms of making more revenue, but a disastrous development for the environment. In this year's issue, we'll focus on greener, cleaner parking that is sustainable for the future.

Digitization is Rampant Across the Industry

The industry continued on its path of rapid digitization, clear from the fact that there are a number of parking apps coming out this year alone. Our customers now have the chance to choose between parking apps that help them navigate their way through the city to the perfect parking spot.

With retrofit technology readily available to operators, traditional car parks can now be upgraded and digitized at lightning speed. Retrofitting negates the need to purchase expensive equipment, making it a popular choice among operators who have dated legacy equipment. They can automate gates and set up instant, touchless access in just a few days.



Since it's now effortless to digitize a parking business with many competitors vying to get newly digitized car parks into their network, some operators are choosing to put out a custom-branded parking app of their own along with or instead of listing on aggregators.

QR Makes it Big

QR codes have garnered a lot of attention this year - they became big during the pandemic as a lightning-fast and contactless way to pay for pretty much anything through your phone, including parking. Operators have the option to go app-less so that their customers need not be bothered with time-consuming downloads or updates.



Parkers these days prefer to scan, pay and go - with high-visibility QR codes that redirect to custom-branded web apps through which parkers can use and pay for parking and VAS, operators across the world are remodeling how parking works in their locations so that customers can get the perfect hands-on experience that they dream of in a parking lot.

Parkers Turn to Monthlies

The Department of Transportation in the US reported in April that weekday commutes using privately owned vehicles had returned to 90% of how it was before the pandemic hit, a clear indication that people were ready to stop working from home – or that their employers left them with no choice. Regardless, commuters are hitting the road and soon after, cruising around their destinations looking for a good parking spot. These parkers are the ideal customers for monthly permits.

These days a monthly permit can do so much more - it can be offered as a Flexipermit so that the parker can go online and customize their parking passes according to their schedule. With custom-branded permit management solutions like GMP Permit, it's easy for operators to manage and upsell services like parking permits so that they can maximize the profits from regular parkers. This year, we saw a 45% increase in digital permit adoption among our customers, a definitive sign that digital permits are here to stay.

EVs Transform Parking Lots

The EV revolution is finally picking up pace – 2022 saw many governments across the world, including the US, the UK and several countries in Europe, passing legislation that encourages their citizens to purchase electric vehicles. These legislations provide grants to buy EVs, tax benefits for installing a charger in your compound etc.



The automobile industry has aligned itself with the fact that sustainable transportation and clean fuel are the only ways to combat climate change at the rate at which it is aggravating. This is why it has been focusing intensively on going green. As parking lots accumulate charging stations, some speculate that gas stations would eventually become obscure and vintage and parking lots would soon become mobility hubs where you could park and charge your vehicle simultaneously.

Let's Get Started!

This year, the yearbook dives into the biggest topics of discussion in the parking industry in 2022, from EVs to QR Codes. You'll get to see a couple of exciting interviews from veterans of the parking and mobility industry pitching in their two cents about how the past year has been and how the year ahead could be.

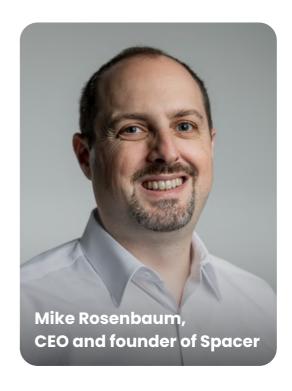


These articles will hopefully give our readers an idea of what to prepare for in 2023 as well as the products and parking trends that stand a chance of becoming the new norm over the course of the next few years.

The Airbnb of Asset Spaces: Meet Spacer Technologies

About Spacer 🗹

We talked to Spacer, the Australia-based tech company that connects parkers with hosts who have unused driveways, garages, storage units or parking spaces! Here's what Mike Rosenbaum, Spacer's CEO and founder had to say about the company's growth in 2022.



1. Spacer has had an exciting year - how would you describe your growth in 2022?

Spacer had a strong year in 2022! We're growing rapidly in the USA and Canada with our acquisition of WherelPark, an online marketplace for monthly parking. We have also worked closely with Parkhound (also a part of the Spacer Technologies group) to launch Chargehound, a peer-to-peer network of EV chargers - we're essentially looking to provide homeowners the opportunity to set up a charging station within their property, which can then be rented out to EV owners looking for a queue-free charging experience.

2. Do you have any new innovations or changes being made to Spacer as a service that you're excited about sharing?

Since our core service expansion into the US market has gone very well, it may not be long before we deploy ChargeHound in North America. The challenges faced by EV owners are pretty universal, the worst of it being range anxiety after the EV is purchased, which is why we've piqued interest from existing and potential EV owners about Chargehound.

A network of electric chargers that is reliant, cost-effective and easy-to-use is absolutely essential in our fight against climate change. We're looking to facilitate both individual vehicles as well as fleets of electric cars, an exciting challenge for Spacer to tackle.

3. Aside from your efforts in popularizing EV charging, has your company taken any steps towards sustainable and eco-friendly practices?

Spacer has always prioritized sustainability. The very concept behind Spacer is ecofriendly – to optimize the usage of existing unused space instead of wasting resources and land constructing new parking locations. We believe that by connecting these two groups of people, drivers searching for spots and property owners with excess space, we can reduce inefficiencies in parking.

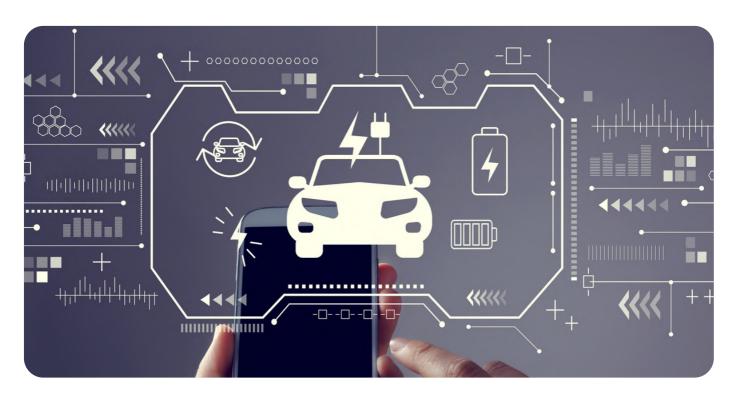
But as a parking platform, we acknowledge that the industry detrimentally affects the climate and contributes significantly to carbon emissions. While we always encourage environmentally friendly travel with EVs, not a lot of people can afford to switch to eco-friendly solutions at the moment. This is why we've decided to plant one tree for every space booked on Spacer. By partnering up with One Tree Planted, we hope to give back to our community by helping our Renters and Hosts reduce their carbon footprint.

We have recently become a carbon neutral company, working with Trace, a programme that calculates the levels of carbon we use. We have introduced initiatives that help us offset the carbon footprint we generate.



4. What are your predictions for the future of the parking industry in 2023?

Our strong belief is that the market will continue to digitize. We see ourselves as digital parking enablers – we have integrated with the Australian government on the Park and Pay app to give consumers more options for peer-to-peer off-street parking and on-street parking in addition to what's built as public infrastructure. We're happy to work with anyone who has free space that they'd like to monetize – private individuals, small businesses, enterprises, public government spaces etc.



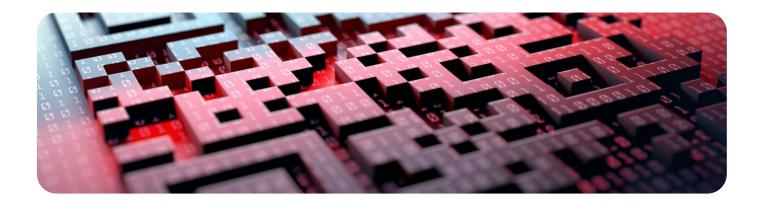
We're also anticipating the EV revolution emerging in Australia. Even though the government has been slow to implement strategies for EVs, it's definitely starting to happen. A legislation was passed quite recently that provides up to \$2000 off the purchase price of EVs as well as tax benefits for those who switch to electric vehicles. There are less than 50,000 EVs in Australia right now, but we predict that there will be at least 3 million electric vehicles in the country by 2030. Since the development of charging infrastructure is yet to catch up, people may need assurances like a peer-to-peer charging network to make the switch – and Spacer is happy to help!

Break time &



Credits: comics.manitowiki.com

In Focus: QR Codes



The parking industry shifted and evolved in 2021 as we bounced back from the pandemic, and many of the restrictions we normalized during those hard times have ebbed away as parkers returned to their usual routines. However, the widespread adoption of QR codes as a touchless method to register and pay for parking has made a lasting impact on parking globally.

Not only are QR codes a mobile-first technology that aligns with modern-day safety measures by minimizing contact, they're also an excellent and compelling tool to promote and market your services. QR codes are soaring in popularity across industries, not just parking, with over <u>75% of US consumers</u> saying that they look forward to using more QR codes in the future.

This is exactly why Get My Parking launched GMP QR, which allows parkers to scan a QR code to start a session and pay for parking through a custom-branded web app. This solution is cost-effective and easy to deploy, making it ideal for operators with traditional parking equipment looking for quick ways to take their parking lots online.

One of the parking operators needed a contactless payment solution for their parkers that was easy to set up and cost-effective. They deployed GMP QR in their location in June 2022 (see below). The operator made over \$96,000 in revenue from convenience fees alone in six months – a clear indicator that customers are eager to switch to a faster, easier and safer way to pay.



How a US parking operator's revenue diversified and increased after QR code deployment in one location

What held QR codes back from popularity back in the day was the lack of native QR scanning capabilities in handheld devices. Today, it's the fear of QR fraud - due to many phishing scams and incidents of fraud, parkers are understandably wary of potential security risks that come with QR payment solutions.

However, a secure, custom-branded QR code platform like GMP QR is easier for parkers to trust – they can recognize and name the brand from the web app, and the unique QR code provided by the Get My Parking team ensures that all is safe on the operator's side.

The best thing about a QR-based payment solution is that it does not require the parker to download an app. With parking apps flooding the market, customers sometimes want a low-commitment, quick solution that can get them in and out of the car park in no time.

Since most smartphones these days come equipped with QR code scanners, all parkers will have to do is scan the QR code in the parking lot to get started with their session – no downloads required. The average speed of the internet is now 5.6 Mbps which means parkers can scan and go at lightning speed.

QR codes have definitely made it big in the parking industry - and by the looks of it, they are here to stay!

EVs and the Rebirth of the Parking Lot

Due to their many advantages over conventional gasoline-powered vehicles, EVs are enjoying a meteoric rise in popularity. However, finding a spot to charge and park an EV is a challenge for EV owners. There are a growing number of public parking lots that have electric vehicle charging stations, but the spots are still hard to come by. Because of this, motorists may be forced to repeatedly drive in circles as they search for a parking spot.



Some municipalities and companies have responded to this issue by providing parking areas specifically for electric vehicles. In most cases, these parking areas are situated in proximity to recharging stations for electric vehicles, allowing drivers to park and charge their EVs at the same time.

Further, several of these spaces are designated exclusively for EVs, so drivers need not worry about having to park next to gas-powered vehicles. With an increasing number of EVs hitting the roads, dedicated EV parking spots are likely to become more readily available.

Funding for EV Charging Infrastructure

On September 14th, US President Joe Biden approved the initial \$900 million funding for the development of EV charging stations across 35 states in the country. This funding is part of a \$1 billion bipartisan infrastructure bill passed in November 2021.

Thousands of charging stations for electric vehicles will be built using a \$5 billion-grant approved by Congress to be split over a five-year period.

Other than that, the number of EVs purchased by the US government has also increased dramatically. According to the White House, less than one percent of federal acquisitions made in 2020 were electric – the number more than doubled the following year, and, as of 2022, has gone up fivefold.

In December, Biden issued an executive order mandating the purchase of nearly all EVs and plug-in hybrid electric cars by 2027. More than 650,000 automobiles are in government use, with another 50,000 added each year.



The U.S. Postal Service (USPS) is entitled to \$3 billion in cash thanks to a legislation approved by Biden in August. This money will be used to purchase electric vehicles (EVs) and charging infrastructure. The United States Postal Service (USPS) told Reuters in July that it plans to considerably expand EV purchases, from an original intention to purchase at least 10,019 EVs to a proposal to purchase at least 25,000 EVs as part of its first order consisting of approximately 50,000 electric vehicles through Oshkosh.

Officials have stated that the absence of charging facilities is a major barrier to the widespread use of electric vehicles. According to Michael Duggan, the mayor of Detroit, increasing the number of EV charging stations is an urgent demand.

The market for electric vehicles is influenced by regulatory changes. California will ban the sale of Internal Combustion Engine [ICE] vehicles in new cars starting in 2035 – auto manufacturers will have no choice but to adapt to stay relevant. They will need to do so well before 2035 if they want to keep up with Tesla, which sold one million BEV's in 2021 and has a market capitalization of more than Ford and GM combined. Some brands are already keeping up – Porsche's luxury EV model outsold its Turbo 911 this year which was a welcome surprise to EV enthusiasts.

Will Parking Lots Become the New Gas Stations?

As of now, more than 80% of EV charging occurs at home. EV drivers rarely step out for long drives because of understandable range anxiety – it's a dreadful experience to have your car run out of juice somewhere that's far away from the nearest charging station. With more EVs hitting the markets than ever, parking lots without charging stations will soon have to upgrade to compete with the ones that do.

Most operators choose to future-proof their car parks with charging stations, especially since government grants provide them with financial benefits. With solutions like GMP EV helping operators who wish to digitize and upsell their charging services, it is an easy choice for car park owners – it keeps things green and clean and provides a neat source of revenue.



The focus for parking operators should be not only on installing EV chargers but to provide a seamless user experience for those wanting to park and charge. Currently for EV users there are two separate transaction flows – one for usual parking and the other for charging. Ideally an EV user should have only one user flow – one ticket, one payment, one app to do both parking and charging in a car park.

This is only possible with deep integration between the EV chargers and the parking technology ecosystem. There are already such tightly integrated deployments in the European and US markets (like <u>GMP EV</u>) where users can start, end, and pay for their charging session via a parking app. These EV use cases can also be white-labeled and made part of an offering by the parking operator's brand.

For car parks to inevitably take over as refueling stations in the near future, it is important to invest not only in the fast chargers but also integrating them with the parking ecosystem to offer a seamless customer experience.

Wrapping Up

To sum up, owing to the many advantages they offer over their conventional counterparts, electric vehicles are becoming increasingly popular across the globe. That said, the lack of charging stations has been a major reason why a lot more people have not yet made the switch to EVs. It is expected that policies like the bipartisan infrastructure deal will go a long way in mitigating this issue and promoting the widespread availability of EV chargers.



Break time 🤣







Credits: joyreactor.com/post/759720

How to Make Your Car Park Eco-Friendly

In the past decade, it has become clear that the transportation and mobility industries contribute to a large portion of the carbon emissions that worsen climate change. Systemic policies that have created so much available parking space have led to built environments that are overall less walkable and less accommodating for key public transit networks.



The pandemic worsened this situation – everyone wanted an individual vehicle, just to protect themselves from the risks of infection that comes with public transport. The current state of the transport industry makes driving appear to be the optimal choice for both essential and non-essential trips, and has led to a number of negative consequences for the environment, particularly when it comes to rising emissions and worsening air quality in many cities.

In the US alone, around 3.1 billion gallons of gasoline are used up every year where 30% of the fuel is wasted by vehicles looking for parking. This equates to 18.6 billion pounds of carbon emissions every year.

Other factors like non-porous materials used for construction, urban heat island effects and pollution from compound stormwater run-off all aggravate the situation.

It is clear that eco-friendly parking reforms are inevitable - here are a few ways in which we can ensure that our parking locations are friendly not just to parkers of the present but also to those waiting for us in the future.

Don't Cover It All in Asphalt!

We understand that there might be limited land available for operators to play around with, but it is not recommended to create a completely asphalt parking lot without any greenery. Without trees, plants and grass aerating the soil and rejuvenating the air, the stormwater run-off pollution will take a toll on your surroundings. A parking lot with a little greenery is beautiful and catchy and you may just end up getting more customers who would like to support an eco-friendly parking lot.



To counter the mud and rut brought by grass and plants in your location, you can use a plastic pavers system to stabilize your grass. First, lay a plastic grid on the ground and fill it with soil mixed with concrete. This mixture supports the growth of grass.

Use VOC-free Paint

When it comes to painting your parking lot, it could be worth considering the type of paint that you use. Some paints contain Volatile Organic Compounds (VOC) like glycol, ammonia, toluene hydrocarbons, and xylene into the air. These compounds are hazardous to human, animal, and plant health. Fortunately, there are many paints nowadays that don't produce these chemicals.



A safer option is to use biodegradable paint for your parking lot striping. This type of paint is made from natural and renewable sources, such as linseed oil and citrus oils. Also, it contains a mere 0-1% VOC. Biodegradable paint poses no adverse negative effect on the environment if washed away by the rains.

Control the Stormwater RunOff

Make sure you know how drainage works in your area before you construct your car park. Stormwater run-off can erode and destroy faster than you think which is why parking lots need drainage channels that redirect stormwater to a waterbody nearby.



There's also the option to collect stormwater runoff and reuse the water for farming or domestic use. While this is not feasible in an urban setting, there are countless parking lots located in suburban and rural areas where rainwater harvesting can be incredibly beneficial.

Use Pervious Material

Parking lots that use impervious concrete are prone to flooding and do not support the replenishment of the water table. To avoid this environmental hazard, consider using permeable concrete. This kind of concrete helps control stormwater and encourages plant growth.



Moreover, you can use concrete with permeable asphalt to achieve a more sustainable parking lot that reduces the heat island effect. They also make the environment safer for motorists by increasing traction through coarse aggregates. Unlike the grassed ones, this type of parking is suitable for high traffic areas with a 20-30 year lifespan

Permeable interlocking concrete pavers are also eco-friendly. Unlike cast concrete and asphalt tarmacking, these allow water to infiltrate into the soil and recharge the water table.

Join the EV charging Revolution!

With the US government sanctioning millions of dollars into developing a functional EV charging network across the country, there is no better time to add EV charging stations to your parking lot. You may be able to install a charging point for free! With solutions like <u>GMP EV</u>, you can offer your EV charging services as a standalone or as a value-added service on a custom-branded cross-platform app.



Go Solar

In 2012, Lawrence Berkeley National Laboratory conducted research in which some shocking data was revealed – <u>35 to 50% of a typical city was just pavement, and of those pavements, nearly 40% were exposed parking lots.</u>

The findings confirmed the environmentally damaging energy cycle that existed in most cities. This is why many governments are installing solar panels in parking lots to harness the solar energy and to compensate for the environmental damage caused by the parking industry.

A law approved in France this year requires that parking lots with 80 or more spaces be covered by solar panels within the next five years. For the biggest parking lots, those with more than 400 spaces, three years has been granted to have at least half of the parking lot's surface area covered by solar.



With the growing production and consumption of EVs — the International Energy Agency reported that U.S. electric car sales doubled in market share to <u>4.5% in 2021, reaching 630,000 EVs sold</u> — solar-powered commercial businesses become more beneficial to consumers requiring EV chargers in parking lots.

Final Word

The fight against climate change involves all of us. In the rush to develop and optimize parking for our customers, we should not forget to make our car parks sustainable, future-proof and eco-friendly, especially for the sake of generations to come.



Break time





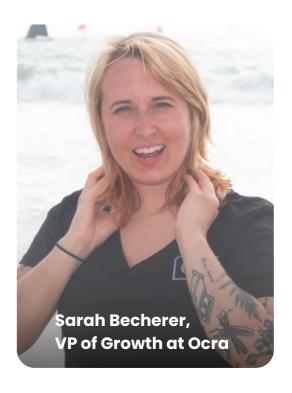


Credits: Satish Acharya

Helping Operators Monetize their Parking to the Fullest: Meet Ocra

About Ocra △

We talked to Sarah Becherer, VP of Growth at Ocra, a pioneer in helping parking operators maximize the yield of their assets. Ocra works with operators to break down data silos and synchronize their consumer demand channels. Here's what they were up to in 2022.



1. We've seen the industry undergo a lot of changes in 2022, with EVs coming in strong, the effects of the pandemic easing off and digital monthly parking seeing a rise in popularity. How would you describe your growth since January 2022 – in terms of product innovations, steps towards future-proofing your business, or increase in revenue?

It was a sensational year for Ocra and our partners! We all love a good data point, so I'll hit you with the figures:

As of mid-December 2022, over \$17.54 million in gross sales and more than 420,500 transactions have flowed through the Ocra platform. We teamed up with 20+ new parking operators this year and onboarded more than 220 locations.

Relevantly, the bulk of this activity took place after releasing Version 2.0 of our platform in August. This is colossal growth, and we're on track to smash it in 2023.

A few more highlights:

1. In response to overwhelming demand, we launched Ocra Version 2.0 (a full bottom-

up rebuild of our centralized consumer demand channel management platform for

operators) in August 2022.

2. We nearly doubled our team, bringing on some brilliant and innovative engineers

who make impossible things happen every day.

3. We were first-time exhibitors at NPA 2022, and several members of our leadership

team had the opportunity to share the stage with parking luminaries in timely, topical

sessions.

4. After rebranding as "Ocra" in Q4 2022, we launched our new website and parking

technology blog in Q1 2022. The site is lightweight and easy to get around, and the

blog is packed full of content that I'm really proud of, including lots of interviews with

folks who are enacting real change every day through the strength of their visions and

leadership.

2. Do you have any new innovations or changes being made to Ocra as a service

that you're excited about sharing?

Oh, definitely! There's a lot in store for Ocra and our partners in 2023, including an

exciting fundraising announcement, big partnership roll-outs, and massive

enhancements to our platform and user interface.

We'll continue to hire talented people to put pedal to the metal on building

integrations that enable operators to manage every aspect of their online business

(rates, inventory, blackouts, reporting, and more) centrally from within our platform.

What I'm personally looking forward to the most is sharing our partners' successes.

Many of the operators who we're working with are seeing significant ROI utilizing our

solutions, and these outcomes are immensely exciting for everybody involved.

One such story we shared out recently is about how one of our partners, a leading national parking operator, is knocking it out of the park at a key location by implementing Ocra's "Optimized Product Structures" to attract two new customer segments: the "last-minute" parker and the "plan-ahead" parker.

Here's the whole story. But basically, we've got these massive unique data sets in our platform, and operators can use them to identify improved rate and duration structures (called "Products" in Ocra) that convert new customers and increase perspace turnover. Then the operator can implement them across all their demand channels in just a few clicks.

The operator saw results within the first two weeks like an 103% increase in online revenue, higher per-space turnover, a shorter advanced booking window, and 4x increase in online transaction volume. Pretty cool, right?

3. There have been many changes in the industry in the past couple of years inspired by concerns and conversations about the environment. Has your company taken any steps towards more sustainable and eco-friendly practices or solutions like EVs or clean energy?

The parking industry mobilizing around sustainability initiatives and making decisions today with the environment in mind is critically important. It's something that we need to do together, all aligned towards the same goal, as a rising tide is what raises all ships.

Some of the ways that Ocra helps foster sustainable innovation are by a) making intros between operators/tech companies and EV companies and b) empowering our partners with integrations for faster entry into the market.

I'm proud to say that the companies we work with actively demonstrate awareness of what we can all do to prioritize the environment, and their business practices reflect that. They practice what they preach – and we do, too.

4. What are your predictions for the future of the parking industry in 2023?

There is really no other industry out there right now like parking! We're picking up so much speed in terms of innovation and the adoption of new ideas and technologies.

I believe that in 2023 we're going to see a massive influx of integrations between different players in the space to standardize, centralize, and monetize data.

Defragmentation will continue to be a priority and more strategic partnerships will emerge. For Ocra, this looks like continuing to build complex custom integrations with customer demand channels so we can pull, pool, and parse all of that data, placing it behind one log-in and presenting it in a way that's accurate and actionable for operators.

By "Rosetta Stone"-ing all of these data points, which look very different depending on which seller console you're logged into, we can give our partners the ability to holistically manage their online business.



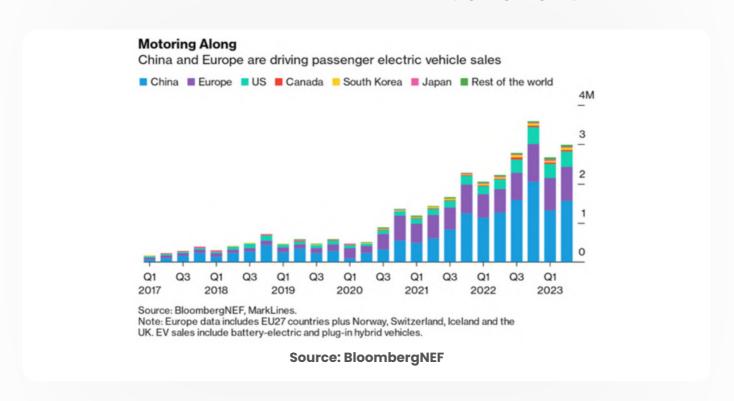
We'll accomplish that through mutually beneficial partnerships with operators and technology companies and keep building those pipes to facilitate the open and secure exchange of data so that it can be effectively monetized.

How Far Along is the EV Revolution?

Gasoline-powered vehicles are at the end of their careers with EVs growing in popularity as the cleaner, more cost-effective alternative to polluting ICE (Internal Combustion Engine) vehicles. With policy makers across the world stepping up to pave the way for electric vehicles, parking operators also have to gear up and prepare for the EV boom.

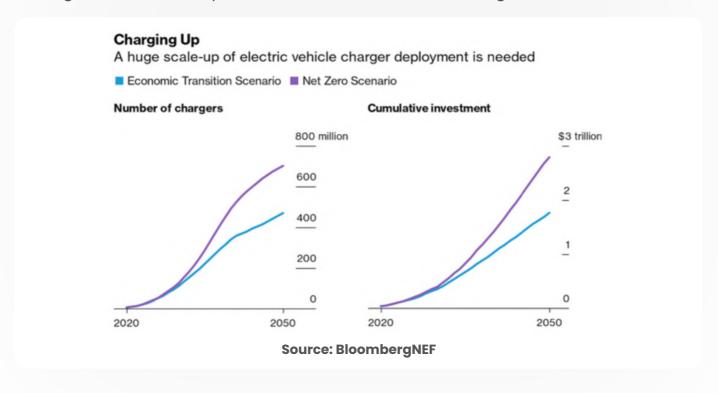


Data from BloombergNEFs study in 2022 show that EV sales are skyrocketing despite slow adoption rates. The EV revolution has already seen a sixfold annual sales rise since 2018, a clear indication that the numbers are only going to go up.



As made clear from the graph above, China is a clear leader when it comes to adopting clean energy vehicles with EV sales hitting around 6 million in 2022. The BNEF predicts that annual passenger EV Sales across the world will triple by 2025 with around 21 million units sold.

But it is not enough for the well-being of the planet that we sell a lot of EVs - we need to make the effort to get the polluting ICE vehicles off the road - for this EV adoption also needs to keep up with the pace of the EV revolution. Only if every car sold globally meet the zero emission standard, at least by 2035, will we be able to counter the damage that has already been done with decades of ICE engines.



The Alternative Fuels Data Center lists around 50000 EV charging stations that are functional in the US, of which around 93% are publicly accessible – this is a good number, but is not sustainable if we wish to achieve a world with zero emissions and completely clean transport.

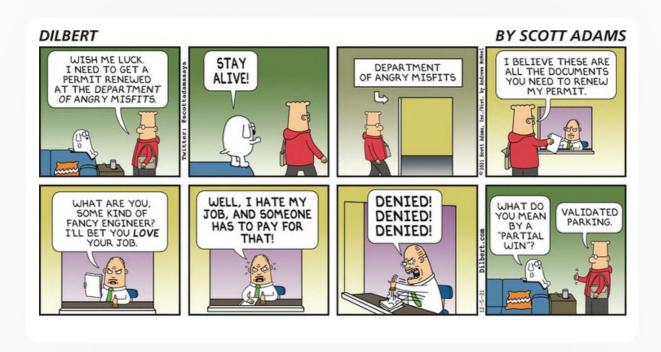
Bloomberg predicts that a fully electric global vehicle fleet would require an additional 233 million charging connectors to achieve our goals - this would require \$1 trillion more of funding.

Many of these new charging stations would have to be installed in parking lots since charging your EV while it's parked is convenient for drivers - this was never a possibility with ICE engines, which is why folks across the industry are excited for parking lots to transition into mobility hubs that can provide more than just car storage to customers. With refueling and EV maintenance integrated into a car park as value added services, parking lots can soon become even more relevant as touchpoints in the transportation industry.

Break time 🤣





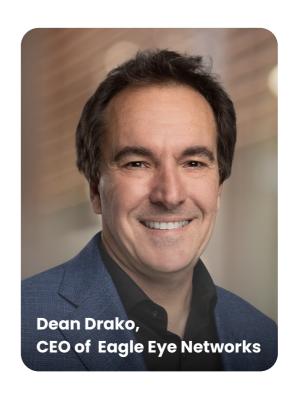


Credits: dilbert.com

Al-Powered LPR is the future of parker identification: A Chat with Eagle Eye Networks

About Eagle Eye Networks 🗹

We talked to Eagle Eye Networks and its CEO Dean Drako to delve deeper into the future of AI-powered cloud video surveillance and vehicle recognition. Eagle Eye Networks is a global leader in delivering cyber-secure cloud-based video surveillance, optimized with AI and analytics to make businesses more efficient and the world a safer place.



1. How does Eagle Eye Network's Al-powered LPR work?

The LPR/ANPR of the future is AI-powered, cloud-managed, and works with standard cameras. Eagle Eye LPR uses artificial intelligence (AI) in a true cloud-based system for high accuracy in all kinds of challenging conditions. Our solutions work seamlessly with nearly any IP or security camera, making it affordable and practical for today's business owners.

Powered by Eagle Eye Networks industry-leading AI and analytics, Eagle Eye LPR works with the <u>Eagle Eye Networks Vehicle Surveillance Package (VSP)</u> to enable seamless monitoring of vehicles across multiple locations.

2. How is the future looking for AI-powered LPR/ANPR systems?

We are seeing increased demand for LPR/ANPR for security and business optimization. Eagle Eye LPR is designed to be easy to deploy and manage. No special cameras need to be installed. The total cost of ownership is reduced as the solution works with standard ONVIF cameras. Our industry-leading AI is continuously improved to support new license plates so that we can maintain our high levels of accuracy. The Eagle Eye Cloud VMS (video management system) is the only platform robust and flexible enough to power the future of video surveillance and intelligence.

3. What factors should operators consider while evaluating LPR solutions?

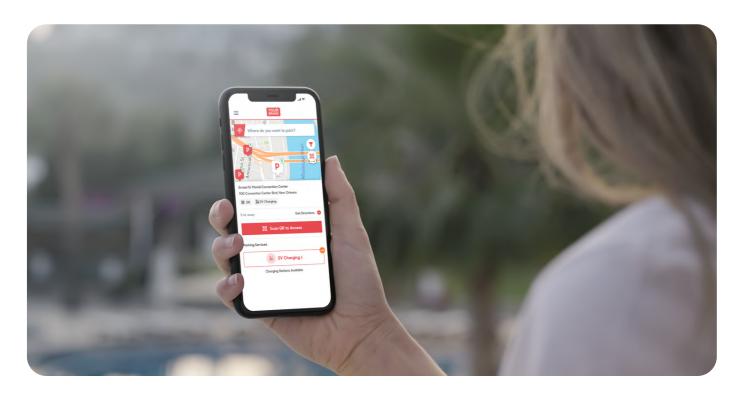
To begin with, operators should look at accuracy, affordability and if the solution is camera agnostic. They should also consider factors such as whether there is additional onsite hardware that needs maintenance and determine whether the solution is easily scalable. Open API integrations and flexibility are also good to have to ensure solutions are future–proof.

Our solutions are designed to be remarkable in all these factors. Additionally, we provide broad geographic LPR/ANPR support throughout North America, Mexico, EU, UK, India, Singapore, Malaysia and Australia. Since it's powered by AI, our solutions provide industry-leading accuracy even with non-standard license plates, in challenging lightning or environmental conditions. Eagle Eye LPR uses AI to continually improve and to support new license plate designs. All of our development innovations are continuously updated on our customer's end via cloud technology.

We also focus on providing flexibility to our customers, which is why we also have an open API that invites unlimited integrations with other technology partners. This is a great incentive in an industry that is quickly digitizing every step of the parking process.

The Importance of Marketing your Parking App

As of 2022, there are more than 200 parking apps available across platforms, designed to help parkers find, use and pay for parking services. These apps charge a little extra as a convenience fee but provide parkers with a streamlined experience in the parking lot with digital discovery, access and payment.



Operators can easily build a custom-branded app for their parking business using solutions like GMP App so that they can avoid heavy commissions from the aggregator apps. Operators also have the option to provide their parkers with a QR-based web app that can be scanned and accessed from phone browsers.

But is Launching a Parking App Enough to Drive Revenue?

With hundreds of parking apps battling it out to be the one that catches the driver's eye, it isn't enough to just launch the app on the Play Store/App Store - you have to market it so that your parkers have a clear idea of how your app stands out from the alternatives.

Here are a few ways in which you can market your parking app:

Place Ads in your Car Park

It's important to make sure your regular customer sees the app promotion, even the less tech savvy ones that prefer the good old pay and display machine. Apps and QR-based payment systems are less susceptible to malfunctions compared to damageable hardware like payment kiosks - these benefits must be emphasized. Placing giant, attractive posters where your parkers can see them should do the trick. Spread them across the location. Ensure the text on it is simple, minimal and legible from afar. These posters should give your customers a clear idea of all the benefits that they can enjoy by downloading your parking app.

Leverage Social Media Marketing

Make sure you're targeting the right audience. Study the demographics of your customer base before creating targeted ad campaigns on social media or Google Ads. Identify the social media platform where your customers are most active and start engaging with them with targeted, paid ad campaigns. Create an interesting brand presence that is hard to forget and stands out from the crowd of parking apps vying for the parker's attention.



Optimize App Reviews

Leave reviews of your parking app online - on the app stores, on Google, anywhere that the parker might check to verify the quality of your services.

A single hateful or upset comment left without a response from your team will convey to the parker that you are not a reliable parking service provider. Invest some time to make sure that the reviews of your app published online are positive and convincing. Ask your happy customers to leave a rating on the app stores!

Set up Promo Codes and Offers

Create parking discounts in collaboration with local retailers, corporate offices and other parker groups so that you can offer parking coupons. Not only are these an additional source of revenue, they're great for attracting new customers. You can consider a coupon service that works for you and run a campaign.



With GMP App, for instance, you can configure parking coupons using a powerful discount engine – the validations can be distributed in the form of QR codes. GMP also has an AR solution that helps operators manage these partnerships efficiently with self-serve portals through which retail admins can distribute, track and pay for validations.

Create Targeted Ads

Promote your coupons and offers, especially if there are events like a football match or a concert happening in your area. Targeted advertisements created based on your knowledge of your customer base can be quite effective in getting new users to sign up on your app. If you have retail discounts set up, make sure that ads are placed near the retail outlets to spread awareness to your target audience. These ads can be via both – offline and online channels.

Help Users Promote your App!

Set up a referral program in your app so that your existing customers can share your solutions with their friends, family and coworkers. Incentivize referrals by offering discounts/credits for every new parker that a user onboards. GMP App has this feature in a way that operators can easily manage and customize parker referral programs.



Listen to your Parkers

Always pay attention to your parkers' demands. Identifying their pain points in the parking lot can help you improve the user experience on the app as well as market it better to the target audience. Make sure that your consumer touchpoints evolve and adapt to new user requirements like EV charging, faster access and easier payments.

Break time &



Credits: Mike Seddon



Conclusion: Looking Forward!

In 2023, we expect to see the parking industry transform its infrastructure to be more data-driven, digitized and EV-friendly. Here's what the near-future looks like for parking, based on our discussions with veterans across the industry.

Smarter Payments, More Digitization

Thousands of car parks across the world will choose to go digital with smarter payment and access methods to help parkers have a completely hands-on experience. The parking meter will soon become a thing of the past as parking apps and QR code-based payments battle it out to take the spot as the customer's preferred payment method. It's true that many customers who are not tech-savvy will still prefer the old system of parking with physical cash and parking tickets, the change is inevitable as more parkers demand for safer, touchless solutions.

More Charging Points for EVs

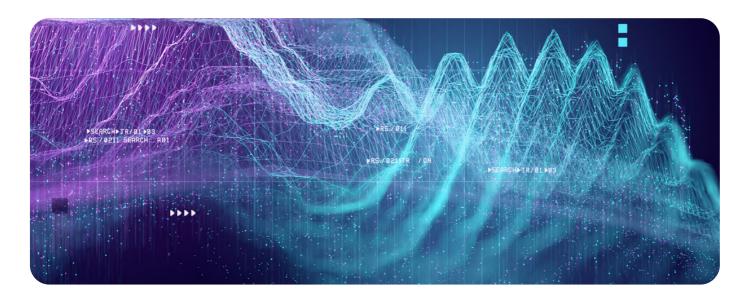
If EVs are to completely replace ICE vehicles by the end of this decade, it's important that we create the infrastructure necessary for EV drivers to have a comfortable driving experience. This includes charging stations in car parks – operators have to gear up to embrace the EV revolution, after which their upgraded car parks can expect to bring in more revenue by offering EV charging as a value-added service.

Parking Apps and Pre-booking

With more parking apps than ever available across app stores, people are getting more comfortable with digital reservations of parking spots that guarantee a seamless experience in the parking lot. Customizing and launching a parking app is a piece of cake for operators, especially with white-labeled solutions like GMP App on the market.

Real-time Data Made Available to Parkers

Providing real-time information about parking availability to citizens can help reduce the time it takes to find parking spots near their destination. Real time data is easy to gather with the help of sensors installed in the parking spot – many operators are making this data available to parkers through an app, so that they can plan ahead, prebook spaces and spend less time on the road, cruising around.



Cleaner and Greener

With governments across the world desperately trying to reduce carbon emissions in response to climate change, the parking industry will have no other choice but to try and make its operations more fuel-efficient and sustainable. Many operators have already started shifting to implement eco-friendly changes in their systems. With more parkers choosing private vehicles instead of the greener public transit options, there will be a demand for cleaner parking alternatives.



See you in 2023!

The parking industry is at an exciting stage of its growth, where the clean energy shift is set to transform the humble car park into a self-sufficient mobility hub where energy is harvested using solar panels and used to recharge park EVs. As car parks and operators adopt smarter solutions like parking apps and QR-based payments, parking will soon become a sophisticated and fully digitized process.

We hope you're excited for 2023 and all the innovations, opportunities and challenges it will bring our way - see you next year!

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