



Shifting gears: A study into the impact of EV adoption on gas station viability

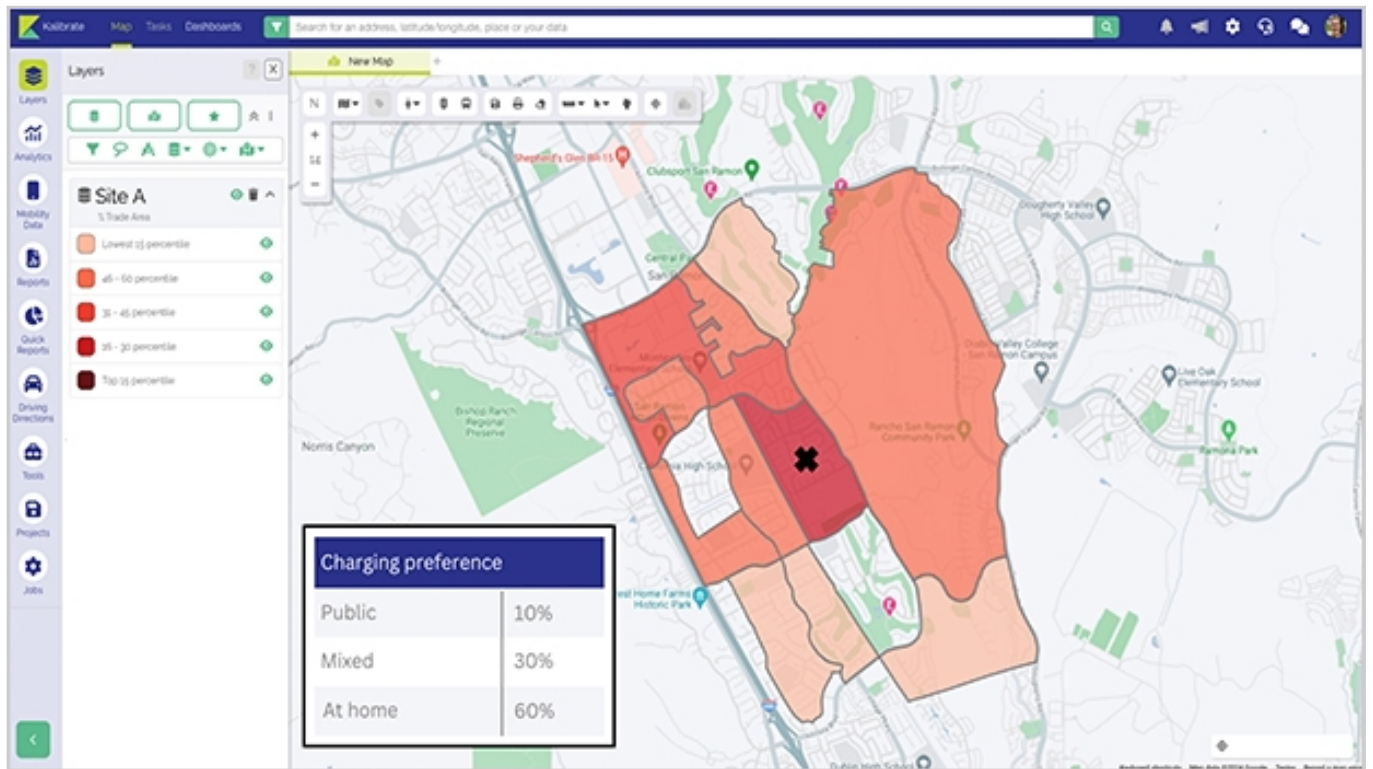
The movement towards electric vehicles has raised questions around the impact on fuel demand - and the long-term viability of some gas stations. As EV adoption isn't evenly distributed, sites will start to see fuel volumes impacted at different times. So how can data inform strategic decisions as EV adoption begins to impact fuel volumes?

This article looks at three gas stations in California and Oregon. Using Kalibrate's data on EV adoption and fuel demand forecasts, we'll share how gas stations in different types of locations will experience varying levels of fuel demand impact.

Site A is located in a residential area. The local consumer base has high levels of EV ownership. Site B is in a transient location, serving customers that travel through on a major highway. Site C is in a residential location with low EV ownership levels. What can data tell us about these sites? And how can that insight be used to think strategically, maximizing the revenue potential of the stations as consumer needs change?

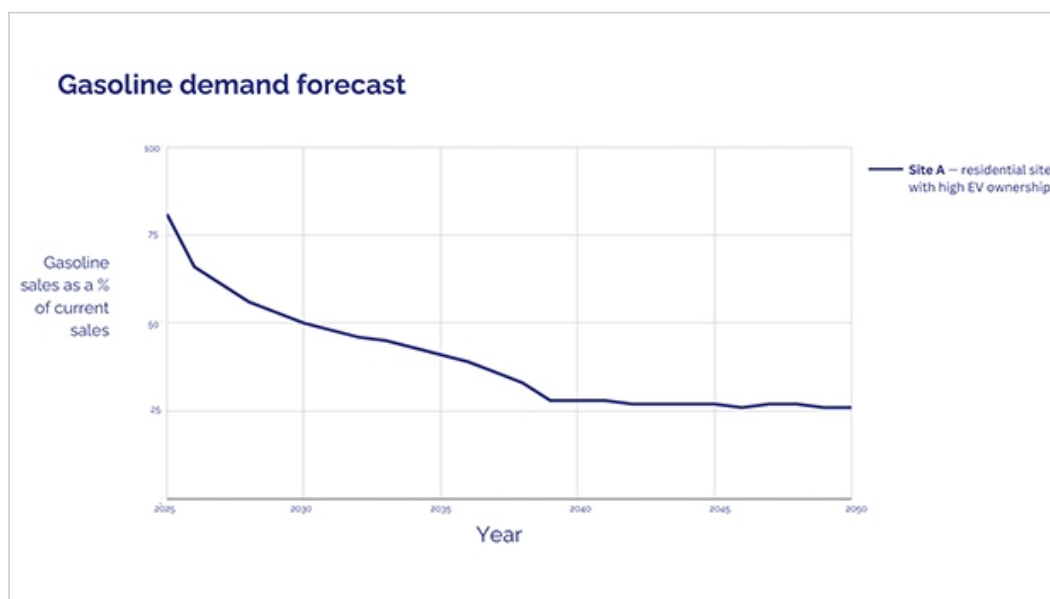
Site A. The residential site with high EV adoption

This site located in central California, sits firmly within an area of "early adopters" of electric vehicles. This area already has a high percentage of EV ownership, and with EV adoption forecasted to continue rising, offering EV charging seems like a no brainer here. But looking a little deeper into the data can reveal important insight for gas station owners in areas like this one.



While this site is located in close proximity to a highway, the trade area analysis shows that its customers are concentrated locally. A high percentage of the population in this location live in single family households with driveways, meaning they have the ability to charge at home. In fact, 60% of consumers within the trade area prefer to charge at home, with only 10% preferring public charging. As this site is not serving customers from the highway it's unlikely to be a location that people would choose to stop and charge at during longer journeys.

Demand for EV charging at this site might not be enough to secure the future of this gas station. The gasoline demand forecast for this site shows gasoline sales dropping to between 25 and 30% of current levels by 2040.

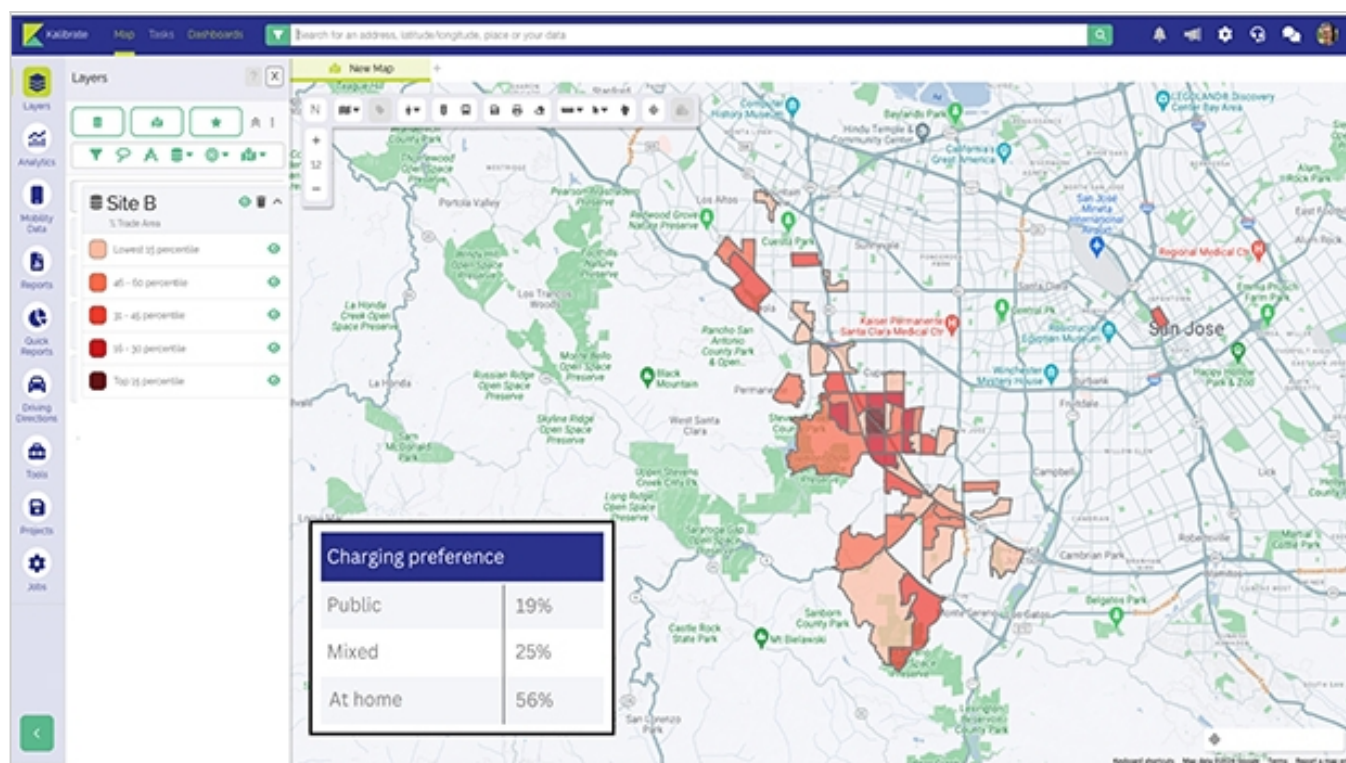


In just 15 years, this site will lose 75% of its fuel volumes — and, as a high percentage of locals prefer to charge EVs at home, gas station owners with sites in locations like this one should evaluate alternative options for their sites.

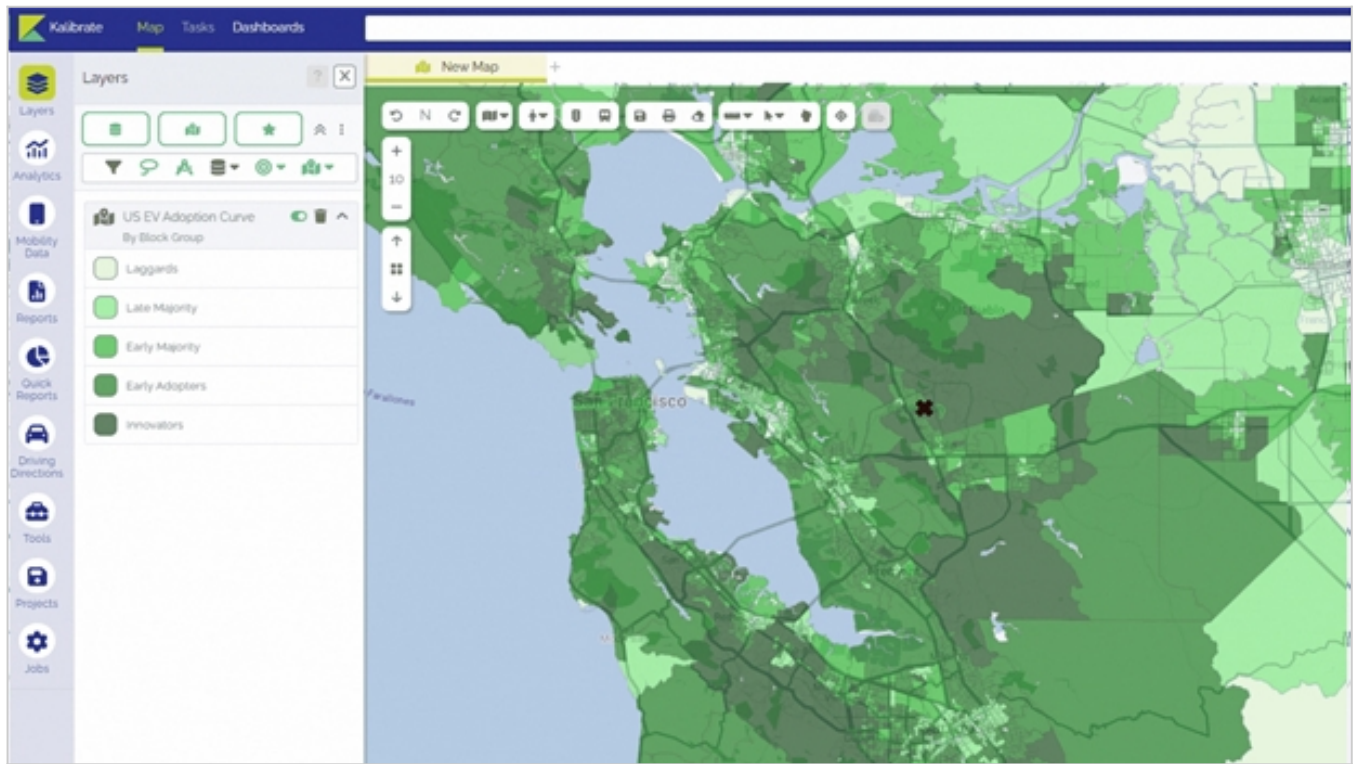
Gas stations are normally on prime real estate, in convenient locations with easy access and high passing traffic. Consider the demographics of your local population and what would best serve their needs to make the most of your real estate. Convenience stores, QSRs, and coffee shops have long been the go-to auxiliary services for gas stations. Could they take over to become the main attraction? Or will we see alternative services take the lead with options like pharmacies, gyms, and beauty offerings gaining in popularity?

Site B. The transient site with high EV adoption

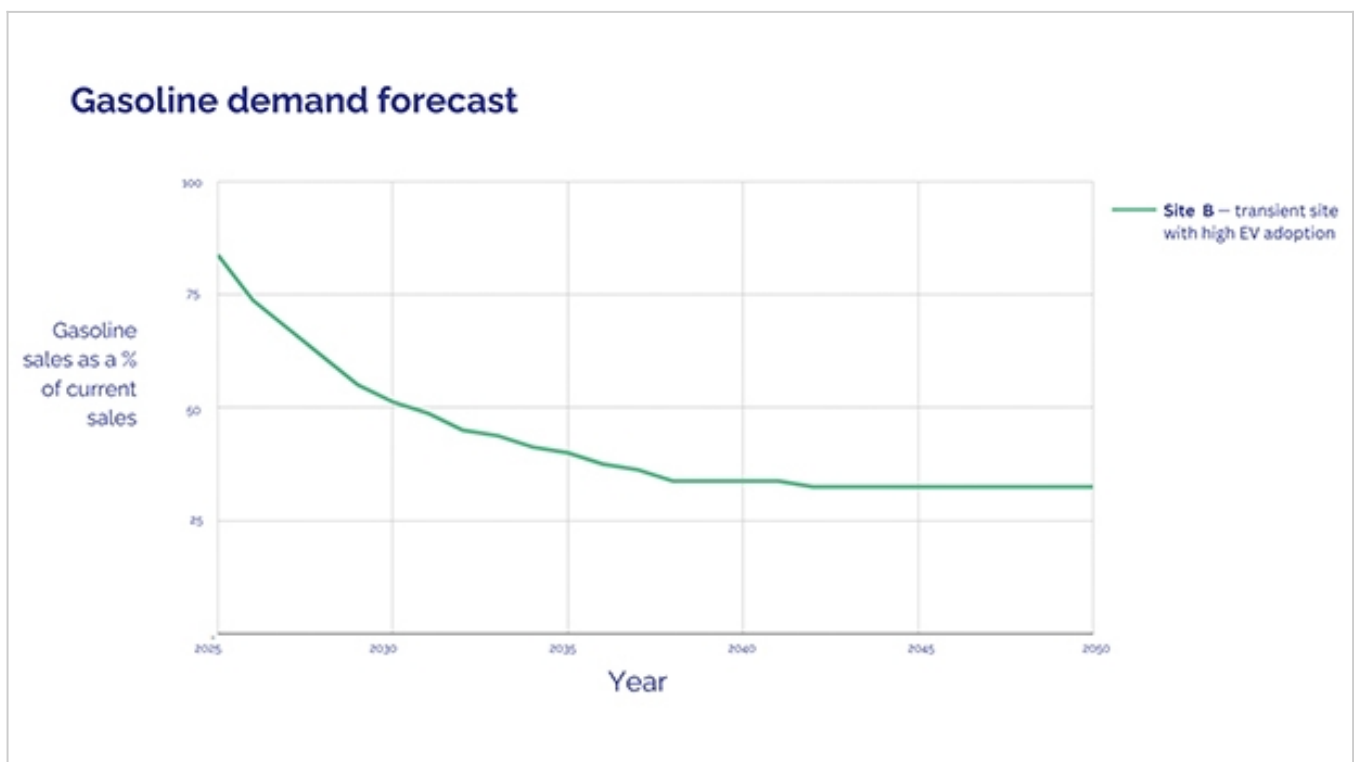
Site B sits on a major highway so serves a transient customer base, reaching far further than just local residents. 75% of this site's trade comes from a trade area that stretches 3 miles North and 6 miles South of the site, while others are stopping by on longer journeys.



In terms of EV adoption, the surrounding area is heavily populated with early adopters and innovators. Unsurprisingly, EV adoption in this area is high, and the adoption curve visualization shows how adoption is expected to grow across the wider area.



A large proportion of the trade area prefers to charge at home, but there are some small groups within the trade area where up to 30% of the residents prefer public charging. EV drivers on longer journeys will need a conveniently located charging point to stop at, and this site is well placed to meet those needs. Gasoline demand is set to drop to just 50% by 2030, and continue to drop to 30% by 2037 where it is expected to remain.

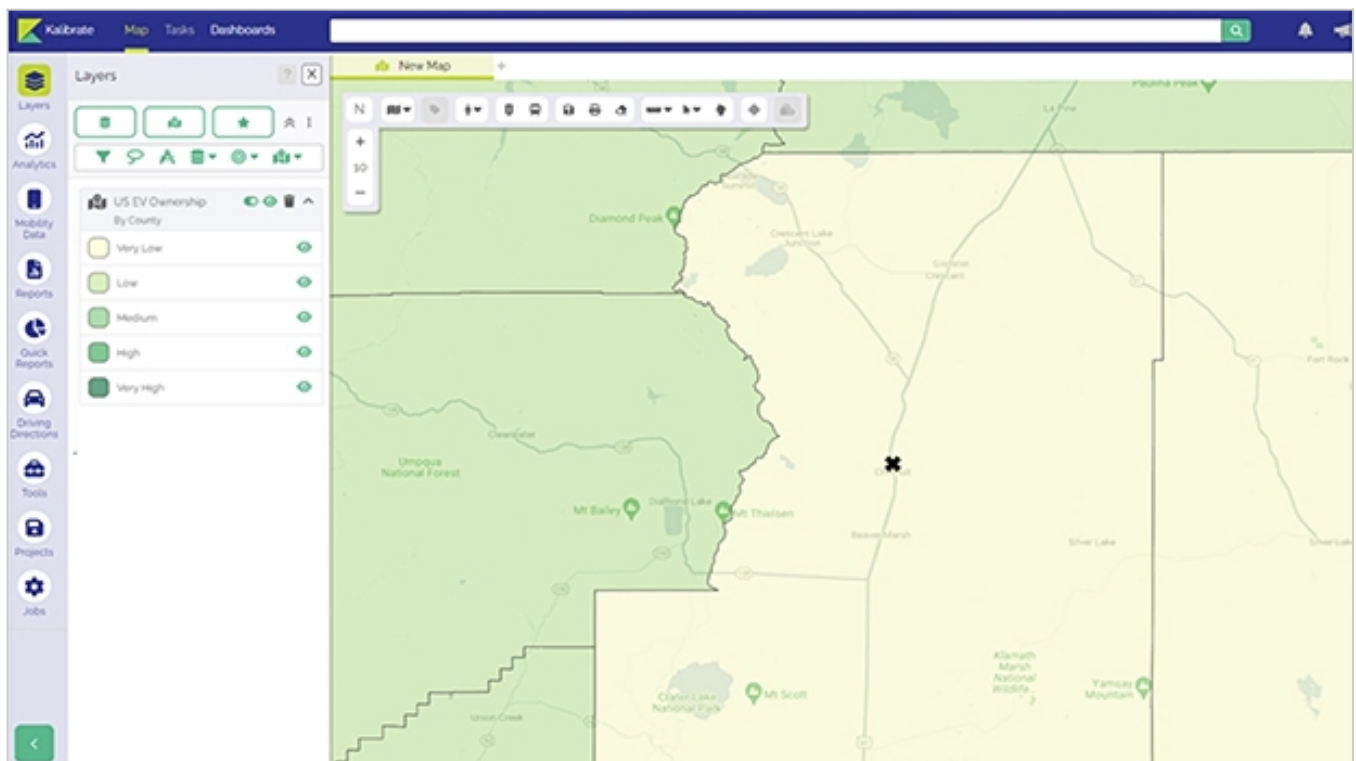


As this site is located on a transient route, it will always be conveniently situated to serve passing

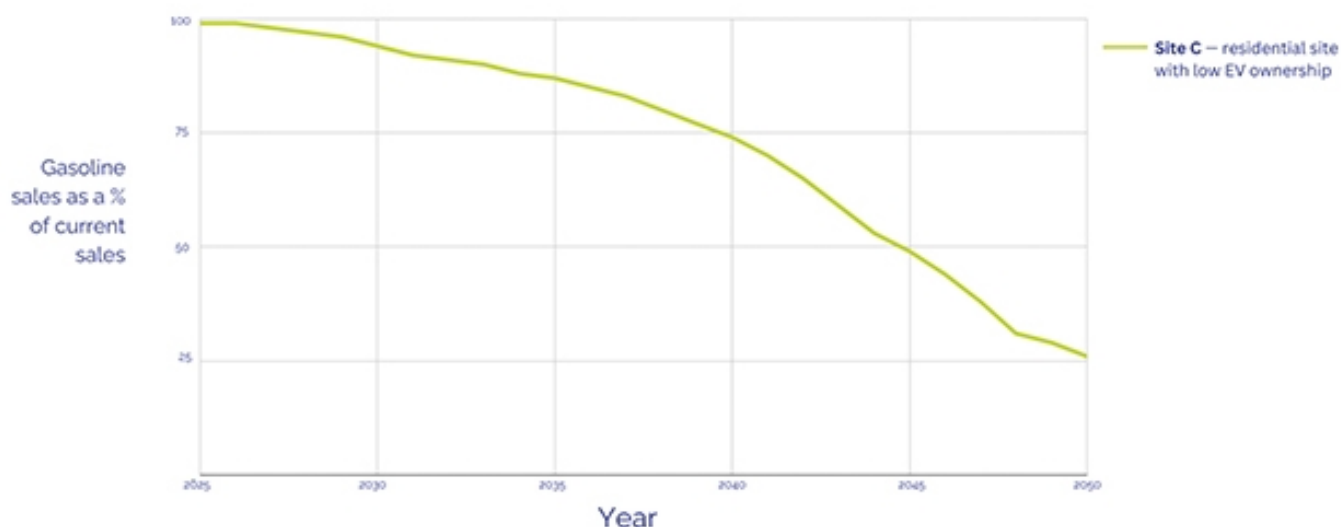
traffic — regardless of how the mode transportation may change in the future. Therefore, sites like this one should retain both fuel pumps and EV charging facilities but may want to consider how much real estate is given to re-fuelling, and how space can be optimized to provide the highest return per square foot.

Site C. The residential site with low EV adoption

The final site in our study sits in an area with very low EV ownership levels. While it is located close to a highway, our analysis shows that 70% of its customer base are from the immediate local area. The EV adoption curve shows that local residents here are in the late majority, so EV adoption is expected to increase slowly. Gasoline demand at this site remains high for the next 10 years and is expected to drop to 75% by 2040. The characteristics of this site's customer base suggest that it will be a viable gas station for at least the next 15 years.



Gasoline demand forecast



How does the future outlook for gas stations differ depending on location?

Location and the way customer demographics and behavior differ between locations, will have a huge impact on future gas stations. Some may be viable as traditional gas stations for years to come, some can survive as hybrid fueling stations offering gasoline alongside EV charging, while others may need a full pivot from re-fueling to utilize their prime real estate for other services.

Analyzing customer behavior and the way it changes is an essential component of securing a successful future for today's gas stations.

Find out more about using data to drive an effective EV strategy.

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