

THE GAS STATION'S DIGITAL FUTURE

Self-driving autos, mobile apps, connected vehicles disrupt oil and gas' retail business

Can you picture a day when you never have to pump gasoline at all at the service station? You will not even have to get out of the car. It is not because they have hired more gas station attendants. It is because the pump and the car can communicate with each other, work together to select your preferred fuel, and fill the tank without the driver being involved. Like gliding through E-ZPass, you would be paying with a cloud-connected app that, by then, may be standard on most autos.

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EXHIBIT 1: THE GAS STATION OF THE FUTURE

A lot more than just a place to refuel your car



APP-ENABLED ON-DEMAND FUELING

The gas station that comes to you at your house or wherever



DIVERSITY IN THE FUEL OFFERING

The challenge serving conventional cars, electric cars, driverless cars, and people with no cars



EVOLVING CONSUMER SEGMENTS

The digital evolution of the auto influenced by new technology and a sharing economy



PERSONALIZED FUEL MIX

Ability to custom-mix additives to create your own fuel



MODERNIZED STATIONS WITH UNIQUE SERVICES

Making a digitally enabled gas station into your personal concierge



MOBILE AND SMART-CAR APPS

Enhanced selection and seamless interaction between customer and site



CONNECTED CARS

"Smart" next generation autos with constant connection to the cloud



ANALYTICS AND ON-SITE MARKETING

Developing customized promotions for individual customer and site



SELF-DRIVING AUTOS

Cars that take themselves to the gas station and fuel up



AUTOMATED FUELING AND PAYMENT

No need to leave the vehicle with connected, self-driving cars

Source: Oliver Wyman

If your vehicle is self-driving, you should be able to be happily ensconced in your bed or at your computer while your car buys the gas without you even being there.

A NEW RELATIONSHIP WITH THE AUTOMOBILE

This is the future for service stations and gasoline consumers. Today, comparison apps may seem high-tech for your neighborhood favorite, but within the next decade or two, the gas station around the corner will likely be serving everything from hybrids, to autonomous cars, to electric vehicles, to car shares – and selling them a lot more than just regular and premium.

Like so many industries disrupted and transformed by technology, the iconic gas station will soon undergo what will be a pretty substantial digital makeover that connects it not just to the consumer but the car itself. It is not one trend pushing the change; it is a multitude of disruptions that are overhauling our relationship with the auto and the way gasoline is sold. And with all these things in transition, the

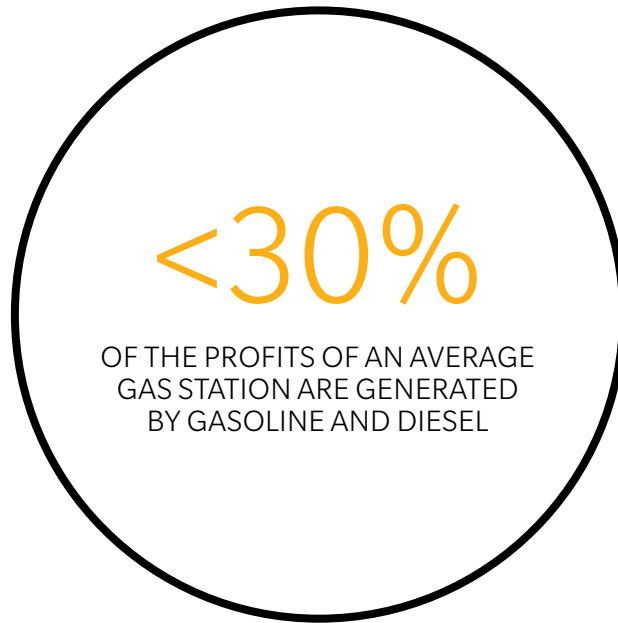
business model for the service station must ultimately begin to reflect the new reality.

Gasoline demand has begun to decline in more mature economies and will probably continue to as a growing number of people do not dream of owning a car the way previous generations did. According to the US Census, the number of no-car households increased slightly in 2015, perhaps in part because more people want to live in cities, and of course the well-documented lack of interest in car ownership among millennials.

COOL SERVICES, A VARIETY OF FUELS

The gas station of, say, 2030 will not only have to do things differently; it will have to do different things to be profitable. For instance, one futuristic vision is to have short-distance drones deliver pre-ordered snacks or packages while the driver waits in the car. (See Exhibit 1.)

The gas station of the future is going to have to mirror the diversity of its clientele. Given the rising popularity of hybrids



and electric cars like Tesla, perhaps the gas station will have to consider having charging stations, as some now do in Europe. Or perhaps the demand is for compressed natural gas or liquefied petroleum gas. Already, gasoline and diesel generate less than 30 percent of the profits at the average gas station, and that figure may continue to decline, not necessarily from low demand but because the gas station is selling so many other services and products.

Of course, we are used to the convenience store aspect of gas stations, changing them into personal fueling stations – and that service is expected to become more ubiquitous and more sophisticated over time. But the gas station also will likely be a place where you can pick up your order from Amazon after it was delivered to the station by drone. Or maybe you pick up groceries that you ordered or your dry cleaning. In essence, your gas station becomes a giant post office box or a personal concierge – a convenient one-stop shop for the sharing economy as it blossoms.

2 AM GASOLINE CALLS

The change may go beyond the services the station offers; it may involve when it offers them. The busiest time for the gas station of 2035 may be at 2 am when autonomous driving cars are programmed to take themselves to the station to fill up for the next morning's drive to the office.

The transactions may not even take place at the service station as on-demand fuel services begin to pop up. With an app, consumers can type in their order and have it delivered to their office parking lot or their driveway.

Stations also will deal with more wholesale purchasers, as car-sharing services like Lyft and Uber grow. Rather than sell to

individual drivers, service-station franchises may only maintain long-term contracts with the companies that employ drivers. Manufacturers of autonomous autos also may decide to develop long-term fuel programs for their buyers.

ANTICIPATING THE FUTURE

While the potentially painful disruption is not entirely welcome news for the legions of independent gas stations and their owners, it represents an opportunity for early adopters, ready to embrace and anticipate change. Already, we are seeing service stations experiment with predictive analytics and other technology-driven innovation like mobile payment. For instance, one US convenience store-gas station chain is cutting gas prices by up to 10 cents per gallon for customers paying via app-enabled direct debit.

By 2022, cars are expected to have enough internet connectivity to allow drivers to simply ask their cars for recommendations on where to go for gas and then rely on the car to seamlessly pay for it. In the United Kingdom, Jaguar and Shell are piloting advanced capabilities for site interaction with such web-enabled vehicles.

The digital revolution has already compressed product cycles and brought disruptive innovation to a range of industries. Like it or not, the traditionally conservative gasoline industry appears to be among its next targets. What is not clear is which enterprises will be early movers and which will go the way of the drive-in movie. ●